

Food &c

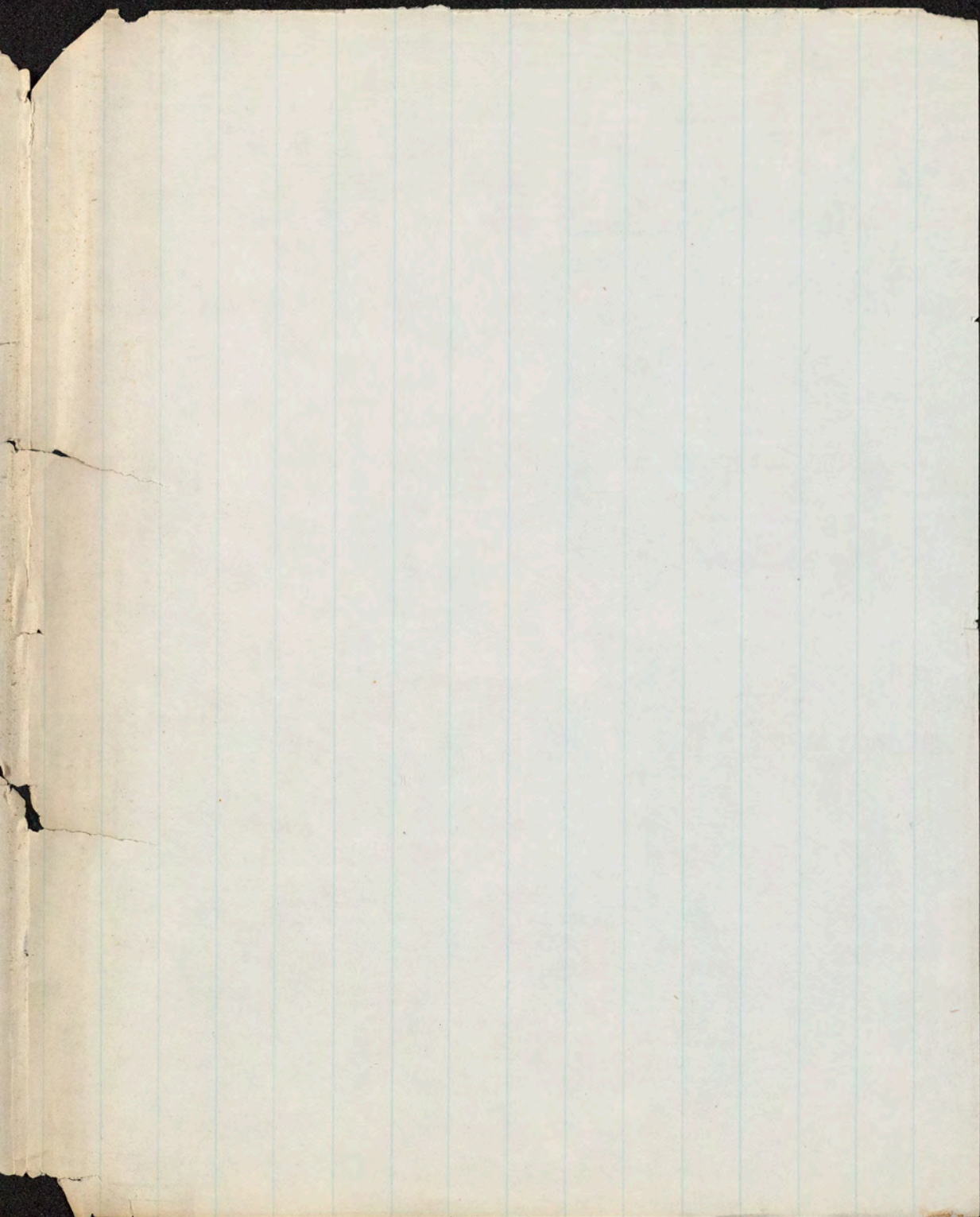
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Accessory Food

Tea, Coffee, Cocoa &c
Alcohol.



[Faint, illegible handwriting in the center of the page, possibly a signature or a list of items.]



In Frankfort, Germany, water from a chemical manufactory had this effect.

CALCULUS.

Stone or calculus is supposed to be caused in the same way. In Russia, Norwich, Eng., and Kentucky this is very common. [See my Practice]

GOITRE.

Goitre, or enlargement of the thyroid gland is common in the low valleys of the Himalayas, Alps &c.

COMBINATION OF CAUSES.

It is due to a combination of causes. Dampness, chilliness, and the exclusion of light, intermarriage, and above all bad water, are the causes. The water is found by those who made the observation, to contain an excess of lime and magnesia. * Removing the patient often cures him.

ACCESSORY FOOD.

We are now ready to pass to the accessory food; that is such as is not ^{constantly} necessary, but in many circumstances useful.

CONDIMENTS.

The condiments: pepper, mustard, salt and vinegar, come first. They are useful when there is a debility of the stomach and digestive organs. In perfect health.

1972

~~*
^ Punishment once in Holland to deprive criminals for a long time of salt.~~

173

They are moderate stimulants.

they are unnecessary. Though belonging
~~this text requires to be analyzed and explained here.~~
~~the physiology of stimulation, yet~~
By stimulation we generally mean some-
~~thing that will bring the system above~~
~~par, or if below, up to it.~~ ^{action or influence of organ or by excitation}
When there is no necessity for ^{such} excitement, the use
of stimulants is ^{more or less} injurious. Exhaustion
follows it. ^{in proper} In the case of children
and ^{all persons} healthy persons, stimulants
~~should not be given.~~ The simplest
diet is always the best for health.

There are however, persons who need
stimulation ^{of digestion}. Especially in hot climates
and warm seasons. ^{requiring condiments} are they ^{necessary}
when there is a tendency to relaxation
of the alimentary canal.

These stimulants are the products of
hot climates; and are adapted to
the regions in which they grow.

Salt, though ^{used as} a condiment is neces-
sary to those far inland. Near the sea
it is not so necessary because the veg-
etation and everything else possesses it.
Pepper is of two kinds. The black

CONDIMENTS
UNNECESSARY.

ESPECIALLY
FOR CHILDREN.

TROPICAL
CLIMATES

SALT.

PEPPER.



Piper nigrum →

Also in Jamaica

Capicum Annuum
of S. Am. & W. Indies.
„ Fastigiatum
of Coast of Sumatra.

brick dust

LAD'A.

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WED.

anted.

SIT.

nd Sold

reserved

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T. L. ASHBRIDGE & CO.
TIONEERS, No. 505 MARKET
above Fifth.

POWELL & WEST, AU
EERS, No. 28 South FRONT stre

BARRITT & CO., AUCTION
No. 230 MARKET street, Cor. of

CARRIAGES, &C.

UNITED STATES NATION

WAGON AND COACH

DINING-ROOM FURNITURE. - A
ver-ware, China-ware, Knives, For
linen, &c.

LIQUORS. - Also a choice selection
Brandies, Gins, Whiskies, Sogars, &c.

FIXTURES. - Also the Gas Fixtures
llers, Awnings, Lamps, Kitchen Utens

MARBLE BAR. - Also the Ma
Shelves, Fire-proof Safe, &c.

LEASE. - Also the Good-will and L
January 1, 1867, for Three years.

May be examined with Catalo
days before the sale.

Sale without reserve or limit
of the Sheriff.

B. SCOTT, JR., AUCTION
1020 CHESTNUT STREET.

Sale at 29 South Sixth street
STOCK OF A WHOLESALE AND
BLANK BOOK AND STATIONERY

FRIDAY MORNING,
16th inst., at 10 o'clock, on the pr

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is the milder
red pepper, is
as a medicine

MUSTARD.

As to must
ply. In large
it is an emet

VINEGAR.

Vinegar is
anti-scorbut

ADULTERATIONS.

All these
adulteration

tains, woody
peas, &c. Red contains brick dust.

Boiling them whole is a sure protection.

Mustard is not often adulterated. The
white is the more agreeable. Vinegar with SO_3 .

SPICES.

Spices, likewise, are of tropical
origin. The same principles apply to
them. They are often required by dysp
peptics, & suit best in hot climates and in summer.

BEVERAGES.

Leaving the condiments we next-
come to the beverages. Some kind of
exhilarating beverage is taken all
the world over, from Paraguay, to Fab
rador. There is a general demand

Mild

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The Pepper Plant.

The three important peppers commonly found on the dinner table are white, black and cayenne, all natives of the tropics. There is a variety of the genus *piper* to which the white and black peppers belong — cayenne being a member of the genus *capsicum* called so, from a Greek word which signifies to bite. The variety is a great favorite with housekeepers and cooks, and has received from them the flattering name of "all-spice," as it combines in itself the flavor of cloves, nutmeg and cinnamon; it grows plentifully in Jamaica and other American islands, where it was first discovered by the Spaniards, who gave it the name of *Pimenta de Jamaica*. The French call it the "round clove."

Black pepper is cultivated in large quantities in Malacca, Java, and especially at Sumatra, the trade of these places being almost exclusively in these spices. A pepper garden during the ripening of the pod is a lovely sight, being a large plot marked out into regular squares of six feet, in each of which are planted young trees called *chinkareens*, that serve as props to the pepper vines. When the prop has reached twelve feet high, it is cut off and the vines planted, two to each prop. A vine is three years in coming to maturity, and the fruit, which grows in long spikes, is three or four months in ripening. The berries are plucked as soon as ripe, and spread on mats on the ground to dry, by which process they become black and shrivelled, and are imported here as black pepper.

Piper nigrum

Also in Jamaica

Capsicum Annuum
of S. Am. & W. Indies.
" *Fastigiatum*
of Coast of America.

brick dust

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Capsicum, or
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MUSTARD.

As to m

ply. In large quantities, like *Salsola*
it is an emetic. *Sinapis Alba & Nigra*, seeds.

VINEGAR.

Vinegar is, by some, thought to be
anti-scorbutic. If so, it is only slightly.

ADULTERATIONS.

All these substances are liable to
adulterations. Black pepper often con-
tains woody fibre, saw-dust, ground
peas, &c. Red contains brick dust.
Bruising them whole is a sure protection.

SPICES.

Mustard is not often adulterated. The
white is the more agreeable. Vinegar with SO_3 .

Spices, likewise, are of tropical
origin. The same ~~principles of use~~ apply to
them. They are often required by dep-
peptics, & suit best in hot climates and in summer.

BEVERAGES.

Mild

Leaving the condiments we next-
come to the beverages. Some kind of
exhilarating beverage is taken all
the world over, from ^{Chin}Paraguay, to ^{Lab}ra-
rador. There is a general demand
^{for them}

The Pepper Plant

The cayenne of commerce is the grain or seed of capsicum ground and mixed with flour, and then baked into little cakes in an oven; these are again broken up and mixed with more flour and placed in jars for sale. The tree or plant is very beautiful, and forms a great ornament to a garden, but it is very tender and requires much care. It is more pungent than either white or black peppers, and is often adulterated with logwood, mahogany sawdust, and red lead; this latter can, however, be easily detected by placing a spoonful carefully in a glass of water, when, should it contain any red lead, it will from its specific gravity, quickly drop to the bottom, while the cayenne will sink but slowly.

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Piper nigrum

Also in Jamaica

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of S. Am. & W. Indies
" *Fastigiatum*
of Coast of Sumatra.

is the milder of the two. Capsicum, or red pepper, is ^{generally rather} too strong, being even used as a medicine.

MUSTARD.

As to mustard the same ^{general} remarks apply. In large quantities, like ~~Salt~~ ^{Saltpetre}, it is an emetic. Sinapis Alba & Nigra, seeds.

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Vinegar is, by some, thought to be anti-scorbutic. If so, it is only slightly.

ADULTERATIONS.

All these substances are liable to adulterations. Black pepper often contains woody fibre, saw-dust, ground peas, &c. Red contains brick dust, ^{ground, and lead.} Buying them whole is a sure protection.

Mustard is not often adulterated. The white is the more agreeable. Vinegar with SO₃.

SPICES.

Spices, likewise, are of tropical origin. The same ^{principles of use} ~~principles of use~~ apply to them. They are often required by ^{not perfect in health} ~~depe~~ ^{but are} ~~peptics~~ ^{peptics}, & suit best in hot climates and in summer.

BEVERAGES.

Leaving the condiments we next come to the beverages. Some kind of exhilarating ^{or refreshing} beverage is taken all the world over, from ^{Chinay to} ~~Chinay~~ ^{from} ~~Paraguay~~ ^{to} ~~Labrador~~ ^{for them}. There is a general demand ^{for them} ~~for them~~ ^{for them}.

Mild

(2)

The most extensively used
 coffee and cocoa. In
 ① → * ← Generals are tea, as well as in China, tea is
 England, Holland and Russia, principally drunk; in the East, including Turkey, and in France,
 Germany & the United States, coffee; in Italy, Spain & Central America,
 Cocoa. In the U.S., over 200 mill. pounds of coffee are used
 annually (1868); of tea, over 30 million pounds. next, (2)

③ * Has already been partially naturalized in
 this country — (Sp. Bonnell) & before the war
 in Virginia — Others since E. Asia, up to 35° N. Lat.

W. of Rocky mountains, in California

In S. Carolina now (1871) successful
 & in Tennessee *

UNIVERSALITY.

We may
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It does not tell the
CHILDREN.

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CHINESE TEA.

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in China

As to green

GREEN

&

BLACK.

two differences.

HOW THE
DIFFERENCE
IS CAUSED.

One is that the

green is made by plucking the leaves

young and preparing them by

a rapid process.

The other is in

the coloring matter.

There was once

alarm lest this should be poisonous.

TEA OR COFFEE



ARE among the most convenient and desirable articles in the dining room.

They are applied or detached in a moment, connection with any tea or coffee pot being made by means of a peculiar spring (see strainer represented at lower right hand corner of cut) which is inserted into the spout.

These STRAINERS separate the dregs from Tea or Coffee thoroughly, and are great savers of Tea, Coffee and Sugar, as by their use this beverage is made so clear that no part need be wasted.

Knowing their utility no family would be without them.

We manufacture them both of Tin and heavy Silver Plate, of one size, except the springs, which are of different sizes—being thus assorted to accommodate every variety of spouts.

Call for Sherwood's Tea or Coffee Strainers.

These Strainers are stamped "Sherwood's Patent July 9, 1861 and Nov. 18, 1862."

COLORING
MATTER.

leaves generally than the black. The coloring matter of green tea. But Prussian blue, and indigo, are

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the illustration, which, if continued, would advance the time when the daily journals the country would be printed with illustrations.

Mr. Dawes regretted his allusion to Mr. Lie, but he thought it strange that he should want to buy his paper in England, while Harper's and other illustrated newspapers bought their paper here. It was unfortunate that such a condition of things existed—that Americans could go abroad and employ the labor of Belgium at fifteen cents a day, with blessed powders free of duty, with soda free of duty with an export duty on rays. He could understand how the American sentiment man's breast slept under such circumstances.

Mr. Kerr characterized Dawes' allusion to 15 cents a day for labor as mere stuff. Notwithstanding the cheap labor of Belgium and of the German States, Great Britain was a book manufacturing country of Europe.

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STIMULANTS AND NARCOTICS.—A recent German treatise on stimulants and narcotics estimates that infusion of coffee leaves is used by two million persons, Paraguay tea by ten million persons, chicory, either pure or mixed with coffee, by forty million persons, cocoa, either as chocolate or in some other form, by fifty million persons, and coffee by one hundred million persons. Betel is chewed by one hundred million persons, hashish is chewed or smoked by three hundred million persons, and opium is used by four hundred million persons. Chinese tea is drunk by five hundred million persons, and tobacco is smoked, chewed or snuffed by the greater part of the inhabitants of the world.

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cocoa. In
China tea is

① → * ← Beverages are ^{as well as in} England, Holland and Russia, principally drunk; in the East, including Turkey, and in France, Germany & the United States, coffee is used. Cocoa. In the U. States, over 200 mill. pounds of coffee are annually (1868); of tea, over 30 million pounds. ^{next, (2)}

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177

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TEA OR COFFEE STRAINERS



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UNIVERSITY.

CHILDREN.

CHINESE TEA.

GREEN

BLACK.

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young, ^{leaves, generally, than the black.} and preparing them by
a rapid process. The other is in
the coloring matter. There was once
alarm lest this ^{coloring matter of green tea} should be poisonous.
But Prussian blue, and indigo, are

TEA.

Lo Yu, a learned Chinese who lived before the 10th century says of tea: "It tempers the spirits and harmonizes the mind; dispels lassitude and relieves fatigue; awakens thought and prevents drowsiness; lightens or refreshes the body and clears the perceptive faculties." The rapid increase in the use of this beverage throughout Christendom indicates that the views of the enthusiastic Chinaman are being rapidly adopted.

The tea tree grows from three to five feet high, and sometimes much higher; the leaves are from two to three inches long, and half an inch broad.

The pleasant taste and delightful scent for which tea is so highly prized, are developed by the roasting which the leaves undergo in the process of drying. For *green teas* the leaves are heated in shallow pans over a brisk wood fire almost immediately after they are gathered; they are then thrown upon a table and rolled with the hands; lastly they are put again into the pan and quickly dried, being kept in rapid motion by the hands of the workman. Thus prepared they are of a dullish green color, but become brighter afterward.

For *black teas* the leaves are spread out in the air for sometime after they are gathered; they are then tossed about until they become soft and flaccid, when they are thrown into heaps and allowed to lie for about an hour or a little more, undergoing a slight fermentation; they are afterward rolled upon a table in the form of a ball, to get out a portion of the moisture and at the same time to twist the leaves, and after being roasted in the pans and exposed for a few hours to the air and sun, they are then dried slowly over charcoal fires.

The produce of different districts varies in quality and flavor with the climate, the soil and the variety of the tea plant cultivated, as well as the period at which the leaves are gathered, and the mode of drying them.

John Francis Davis, for many years connected with the English Embassy in China, in his published works, says: "It is a general rule that all tea is *fine* in proportion to the tenderness and immaturity of the leaves. The finest black tea, called *pekoe*, consists of the spring buds as they begin to expand, and in like manner the tender leaflets in the green tea districts are made into an expensive

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In S. Carolina now (1871) successful
& in Tennessee

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RA BOWEN
BOWEN & FOX,
GEO. S. FOX.
STOCK BROKERS,
No 13 MERCHANTS' EXCHANGE.
Particular attention given to investments.
Contracts made and Stocks carried at lowest rates.
Information given as to the character of the various
curities dealt in.
Orders executed in New York, Boston and Balti
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same remarks apply to the beverages
as to ~~tea~~ ^{and} pepper ^{spices}. It is only
when a person grows up, when the
chances are ~~ten to one~~ that he ~~will~~
not be ^{always just up to par,} that they ~~should~~ be
taken ^{with advantage.} Reserve force to be economised.

CHINESE TEA.

Chinese tea is the best. It is obtain-
ed from the leaves of two ^{at best} species.
the thea ^{that plant being some- what different from thea} verutis & ^{bohea}. It is grown
in China, Assam, and Japan.

GREEN
&
BLACK.

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HOW THE
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MATTER.

TEA.

Tea-Growing in Iowa.

[From the *Des Moines (Iowa) Review*.]

We have learned of a most important discovery, one that affects every citizen of our land, and one that will add immense wealth to our nation, and revolutionize one of our most important commercial trades. It is almost too important a one to be easily believed, being no less than that tea has been grown in Crawford county, and can be grown here in profusion, and fully as good, if not better, than that we now import. About eighteen months ago an elderly gentleman came to this place, looking around with two to three inches long, and half

The pleasant taste and delightful scent for which tea is so highly prized, are developed by the roasting which the leaves undergo in the process of drying. For *green teas* the leaves are heated in shallow pans over a brisk wood fire almost immediately after they are gathered; they are then thrown upon a table and rolled with the hands; lastly they are put again into the pan and quickly dried, being kept in rapid motion by the hands of the workman. Thus prepared they are of a dullish green color, but become brighter afterward.

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W. off Rocky mountains, in California

In S. Carolina now (1871) successful
& in Tennessee

UNIVERSALITY.

We may argue as we like against it, yet 1/2 of the human race takes something every day, to cheer ^{and refresh} without inebriating. This universal craving seems to show ~~the~~ demand in the system. ^{I does not feel that men are always nice in their manner & supply of things} In early life, however, the same remarks apply to the beverage as to ~~tea~~ ^{pepper}. It is only when a person grows up, when the chances are ~~ten to one~~ that he ~~will~~ not be ^{tempted just up to Paris} ~~tempted~~ that they ~~often~~ be taken ^{with advantage.} ~~often~~ ^{Resume force to be economical & eat}

CHILDREN.

CHINESE TEA.

^{Peninsular & recuperation, however, in ordinary life} Chinese tea is the best. It is obtained from the leaves of two ^{at least} species, the ~~thea~~ ^{thea} ~~verutis~~ ^{verutis} & ~~bohea~~ ^{bohea}. It is grown in China, Assam, and Japan.

GREEN & BLACK.

As to green and black tea, there are two differences. One is that the green is made by ~~plucking~~ ^{plucking} the leaves ^{young} and preparing them by a rapid process. The other is in the coloring matter. There was once alarm lest ^{coloring matter of green tea} this should be poisonous. But Prussian blue, and indigo, are

HOW THE DIFFERENCE IS CAUSED.

COLORING MATTER.

Lehmann & Böcker's experiments —

via:

uric acid, &c

Does tea retard waste? Even
as to Coffee it has been made doubtful by
some experimenters.

~~Chinese quick mode of making tea. Water should~~
~~always boil when it is poured on.~~

[End of 24th Lecture, 1872.]

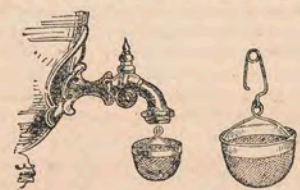
as well as quinine, atropin,
digitalis & cod liver oil, diminish
uric acid & increase urea.

Harley

Dr. J. Tyson,
in a lecture pub.
in Phil. Med. Times
& Gaz., 13, 1873, asserts,
without reference to au-
thority, that tea & coffee,
as well as quinine, atropin,
digitalis & cod liver oil, diminish
uric acid & increase urea.

SHERWOOD'S

URN OR FAUCET STRAINERS



ARE made expressly to fit Faucets, and when attached to Tea or Coffee Urns accomplish the same desirable result which the Tea or Coffee-Strainers do when attached to Tea or Coffee Pots; and they are alike useful when applied to all Faucets through which are drawn oils syrups, compounds, spirits, or any liquids

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Coffee retard the formation of tissue. It makes food go further. It is to the sustenance.

On the variation in the amount of urea excreted under normal nourishment, and under the influence of tea and coffee, by M. E. Roux. The author found that these substances very largely increase the amount of both urea and chlorine voided in the urine, if they be taken after abstinence from them, but that when continuously used, the quantity gradually returns to its normal amount. Hence he regards this accumulated urea

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stion is still open.
their is a poison.

GLUTEN,
STARCH,
TANNIN
OIL.

Tea contains gluten, starch, tannin (shown by its coloring spots), and an aromatic oil on which its flavor depends. Only the best have it.

FLOWERED
TEA.

The Chinese often add flowers to tea and some of these teas bring a high price, though much inferior to pure tea. A year or two ago a company was

kind called *Loong-tsing* or *hyson pekoe*, which is highly esteemed by the Chinese, but is not brought to Europe, as it is so delicate and slightly fired as to spoil with the least damp."

These fine and superior teas are frequently refused for poorer grades because of the annoyance from the fine settlements in the cups; but this difficulty can be entirely avoided by the use of **SHEPWOOD'S TEA AND COFFEE STRAINERS**, so highly prized by housekeepers.

Tea was first introduced into Europe early in the 17th century by the Dutch East India Company, but its use seems to have been very limited in England, even toward the close of the century, for Mr. Pepy, Secretary of the Admiralty, writes in his diary, Sept. 25th, 1661, "I sent for a cup of tea (a Chinese drink) of which I never drank before." In 1664 the British East India Company bought two pounds and twelve ounces of tea as a present for his Majesty. "In 1667 the Company issued their first order to their agent at Bantam to buy one hundred pounds of the best tea he could get." Until 1707, tea was sold in London at sixty shillings (\$12.00) per pound, the East India Company holding a complete monopoly of the article until the year 1833.

In the year 1690 the British Parliament imposed a duty of eight pence per gallon of the beverage sold in the Coffee Houses—this duty remained until 1689, when a duty of five shillings (\$1.00) per pound was imposed.

It is a remarkable fact that both tea and coffee were introduced

head "Fenland," the authors include marshy lands, in which the rivers Witham, Great Ouse interlaced, including nearly 2,000 square miles, and roughly bounded by a line drawn from Lincoln by Bourn and Peterborough to Cambridge on the west; from Lincoln to Skegness on the north; from Cambridge and St. Ives to Brandon on the east and from Brandon to Lynn on the east (thus including

[End of 24th Lecture, 1872.]

as well as quinine, atropin, digitalis & codliver oil, diminished uric acid & increase urea.

Harley

↑

Ceanothus in New Jersey Tea

(P. H. S. 1868)
Coffee
Tea 30 miller
on
Hubert (6?)

Constituents of Tea.

1. Thein; 1 per cent the minimum. $3\frac{1}{2}$ maximum
2. Volatile Oil; 1 per cent, maximum.
3. Gluten; 20 to 25 per cent. In China made in tea pot or cup just when used.
4. Tannic Acid. In Japan, in cup.
5. Starch, Gum, Fat, &c. In Egypt, Coffee often made in cup.

Coffee. (variable)

1. Caffein; $\frac{3}{4}$ per cent minimum. (Johnston)
2. Volatile Oil & Empyreumatic Oil.
3. Gluten; 13 per cent.
4. Astringent Principle, like Tannin.
5. Fat and Extractives.

Cocoa.

1. Theobromin
2. Volatile Oil, chiefly empyreumatic.
3. Fatty Substance (cocoa butter) 56 per cent.
4. Starch.
5. Gluten, a considerable amount.

→ (See for board also, p. 196) ←

End of 9th Lecture

upon the general nervous system

exactly

COMBINED
OF EFFECT
CAFFEIN &
VOLATILE OIL

on the caffein; for tea and coffee have not the same effect. The ^{effects} depend on the combination of caffein & volatile oil.

If the theory be true, that coffee retards the waste of tissue, we can understand the instinct which leads working men to use it. Many take it three times

into England and Europe in the same decade of the same cen.

The mode of making tea in Russia is as follows:

"The tea is put into a tea-pot, boiling water poured over it, and after standing two minutes, it is poured out into glass tumblers placed on glass saucers, sweetened with sugar and flavored with a slice of lemon. No milk is used. Being left to stand longer than two minutes is supposed to impair its flavor, by bringing out the coarser qualities of the leaves. Made this way it has a clear and sparkling appearance, when poured out into the tumbler."

used by coffee
wing the cause.

This has been proved by the dyspepsia disappearing when the use of coffee was stopped.

NERVOUSNESS
AND
PALPITATION.

Nervousness and palpitation are ^{often produced} caused by coffee. Pereira & Hammond think this is not so, but they must be mistaken. ^{often} Dr. John Bell agrees with me. Dr. Dio Lewis urges cold water.

VALUE OF COFFEE
IN EMERGENCIES.

Coffee is of great value in emergencies. In shipwreck, it is better than grog. Drs. Kane & Hays found it to be ^{as well as} ~~valuable~~ in Arctic climates. In the army, coffee has been found to be the soldier's best friend, as whisky is his worst enemy.

SHIPWRECK.

ARCTIC REGIONS.

ARMY.

For such uses, it should be reserved;
perhaps but how would poor people —

Ceanothus in New Jersey Tea

(P. R. S. 1908)
Coffee
Tea 30 million
Rubber (6?)

Constituents of Tea.

1. Thein; 1 per cent the minimum. $3\frac{1}{2}$ maximum
which it is desired to separate the dregs.

TWO SIZES.

No. 1— $1\frac{3}{4}$ INCH DIAMETER.

No. 2— $2\frac{1}{8}$ INCHES DIAMETER.

These Strainers are made in wire, silver, etc.

maximum.

In China made in teapots or cup
just when used.

In Japan, in cup.

In Egypt, Coffee often made in cup.

Coffee.

- (variable) (Johnston)
1. Caffein; $\frac{3}{4}$ per cent minimum.
2. Volatile Oil & Empyreumatic Oil.
3. Gluten; 13 per cent.
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Cocoa.

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→ (See for board also, p. 196) ←

End of 10th Lecture, 1873

End of 9th Lecture

upon the general nervous system

exactly

COMBINED
OF EFFECT
CAFFEIN &
VOLATILE OIL

on the caffeine; for tea and coffee have not the same effect. The ^{effects} depend on the combination of caffeine & volatile oil.

(If the theory be true, that coffee retards the waste of tissue, we can understand the instinct which leads working men to use it. Many take it three times a day.)

DYSPEPSIA

Dyspepsia is often caused by coffee without the person knowing the cause. This has been ^{under my own observation} proved by the dyspepsia disappearing when the use of coffee was stopped.

NERVOUSNESS
AND
PALPITATION

Nervousness and palpitation are ^{often produced} caused by coffee. Pereira & Hammond think this is not so, but they must be mistaken.

VALUE OF COFFEE
IN COFFEE
EMERGENCIES

SHIPWRECK.

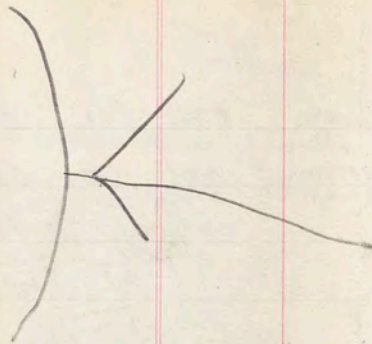
ARCTIC REGIONS.

ARMY.

Coffee is of great value in emergencies. In shipwreck it is better than grog. Drs. Kane & Hays found it to be ^{as well as} ~~valuable~~ in Arctic climates. In the army, coffee has been found to be the soldier's best friend, as whisky is his worst enemy.

For such uses, it should be reserved;

perhaps for the weak & poor people —



* Coulier of Paris proposes as a test ~~that~~ the
 fact that pure coffee will float white on
 boiling water, from disengagement of CO_2 ; while chic-
 -ory will sink. In buying the whole grains there
 can be little risk of being deceived. But even they are
 sometimes counterfeited! ~~Be careful about those imitate coffees~~

of South America.

* a small & pretty tree, ^{Coccoloba} imported many from
 Caraccas.

SUBSTITUTES
FOR
COFFEE.

CHICORY.

DANDELION

ADULTERATION
OF
COFFEE.

ITS
DETECTION.

COCOA.

PREPARATIONS.

CHOCOLATE.

pounds has always been famous as a subject of investigation with chemists, from the time of Berzelius down.

LABORATORY NOTES.

DESTROYING AMMONIC CHLORIDE. — Prof. J. Lawrence Smith recommends the use of nitric acid for destroying any excess of ammonic chloride that may be present in an analysis. The solution is evaporated to a small bulk, and then an excess of nitric acid added and the liquid gently evaporated to dryness. The chloride of ammonia passes off as protoxide of nitrogen and chlorine. This method was first published by the professor about twenty years ago, in his celebrated paper upon alkaline

substitutes for coffee.

It is used intentionally as an adulterant here by the wild about pretty blue flower a bad substitute for coffee, is quite

pleasant, and according to the theory laid down, ^{more wholesome} ~~is~~ better than ^{pure} coffee. That, ^{now} ~~one~~ ^{is} ~~acorn~~ ^{coffee.}

Coffee is adulterated with chicory. They may be detected by ^{adding} making a colored solution in ^{cold} water.

It may also be detected by the persalts of iron not forming green with it, as with coffee.

Cocoa is obtained from the theobroma cacao. The Mexican name is chocolate. The fruit is a kind of

^{small compound} melon. It is prepared in several ways. It is ^{ground into paste with starch & sugar.} roasted whole. 2nd. the husk is stripped (cracked cocoa); and

3rd. It is ground to paste and mixed with ^{sugar, vanilla, cinnamon & cloves,} other articles forming chocolate: ^{flavoured with fruit.}

There are also secondary preparations. as Baker's Broma & Dupond chocolate

RYE COFFEE IN EUROPE. — A Strasburger named Beckmann-Oloffen has prepared a substitute for coffee by taking pulverized and roasted rye malt, mixing with it $\frac{1}{20}$ its weight of barley malt and some caramel, and exposing it to the vapor from roasting genuine coffee. In this manner part of the aroma always lost in roasting coffee is made use of to flavor the rye coffee. If we accept the conclusions of Aubert, that no caffeine is lost in roasting (see "Chemistry of a Cup of Coffee" in December number of this journal), the rye coffee has none of the poisonous properties of this alkaloid, and is preferable to the genuine. The discovery is said to have been already patented in England.

* *Could*
 but that
 boiling water, from disengagement of CO_2 ; white chips
 of mill sinks. In buying the whole grains there
 can be little risk of being deceived. But even they are
 sometimes counterfeited! ~~Roasted wheat & rye imitate coffee~~

of South America.
 a small pretty tree, ^{Coccoloba} imported mainly from
 Caracas.

SUBSTITUTES
FOR
COFFEE.

CHICORY.

One
by m
iona
tion
Gern
Gern
er.

DANDELION

~~Dandelion~~ ^{more wholesome} and according to the theory ^{new} laid down ^{pure} is better than coffee. ^{What, me, a com coffee.}

ADULTERATION
OF
COFFEE.

ITS
DETECTION.

~~Coffee is adulterated with chicory.~~
~~They may be detected by making~~
~~a colored solution in cold water.~~

It may also be ~~discovered~~ by the per-
salts of iron ~~not~~ forming green with it, as with coffee.

COCOA.

PREPARATIONS.

Cocoa is obtained from the the-
obroma cacao. The Mexican name is
chocolate. The fruit is a kind of
^{small compound} melon. It is prepared in several
ways. It is roasted ^{ground into paste with starch & sugar.} whole. 2nd. The
husk is stripped ^{the bean is broken into fragments} (cracked cocoa); and
3rd. It is ground to paste and mixed
with ^{the sugar, vanilla, cinnamon & cloves,} other articles forming chocolate. ^{permitted with fruit.}

CHOCOLATE.

There are also secondary preparations.
as Baker's Broma & Improved chocolate.

Coco - Colocasia Esculenta
(Araceae) fr. India
farinaceous tubers
eaten

* Con
but that ~~it is white on~~
boiling water, from disengagement of CO_2 ; white chips
- of mill sink. In buying the whole grains there
can be little risk of being deceived. But even they are
sometimes counterfeited! ~~Protest about the~~ imitate coffee

of South America.

* a small & pretty tree, ^{Coccoloba} imported mainly from
Caracas.

SUBSTITUTES
FOR
COFFEE.

CHICORY.

There are many substitutes for coffee. One of these is chicory. It is used intentionally ^{by many people} in ^{Continental} Europe; and as an adulteration here. It was imported here by the Germans, and now grows wild about Germantown. It has a pretty blue flower. It is by no means a bad substitute.

DANDELION

Dandelion ~~root~~ ^{with} ^{1/2} coffee, is quite pleasant, and according to the theory ^{now} laid down, ^{more wholesome} ~~is~~ ^{is} better than ^{pure} coffee. That, we, agree.

ADULTERATION
OF
COFFEE.ITS
DETECTION.

Coffee is adulterated with chicory. They may be detected by ^{chicory} making a colored solution in water.

It may also be detected by the per- salts of iron not forming green with it, as with coffee.

COCOA.

PREPARATIONS.

Cocoa is obtained from the theobroma cacao. The Mexican name is chocolate. The fruit is a kind of melon. It is prepared in several ways. It is roasted whole ^{1st. ground into paste with starch & sugar.} 2nd. the husk is stripped ^{the bean is broken into fragments.} (cracked cocoa); and

CHOCOLATE.

3rd. It is ground to paste and mixed ^{the sugar, vanilla, cinnamon & cloves,} other articles forming chocolate; ^{prepared with milk.} There are also secondary preparations. as Bakers Broma & prepared chocolate.

X
O Cooke (Princip. of Chem. Philosophy) says that Caffeine is methyl-theobromin; theobromin can be converted into caffeine by substitution.

Amuldat

X D'Orbigny, Von Tschudi, Weddell -

Coco is an edible starch, from a tree, used in tropical countries.

Cocoa-nut again different: fruit of *Cocos nucifera* of the tropics.

Cacao (Cocoa)

Coca (Erythroxylon)

Cocoa-nut (*Cocos nucifera*)

Coco - starch from a tropical tree, W. Ind.; *Colocasia esculenta*

(Araceae)
farinaceous
tubers

But ~~not~~ ^{with} oxygen.

191

THEOBROMIN

contains

nitrogenous proximate

Cocoa has theobromin, a principle containing nitrogen. ^{1.0} It ~~contains~~ .56 per cent of this principle. It has a ~~small~~ ^{which when separated is} cocoa butter, a favorite application

COCOA BUTTER.

for bruises. Cocoa is therefore nourishing, but is heavier to the stomach. When diluted ^{with milk & hot water} it is a very good drink, well adapted to ^{many} invalids. It is not as stimulating as tea & coffee.

COCA.

Coca ^{is another thing altogether; it} is obtained from the Erythroxylon ^{Coca, a shrub} plant of South America. It is very powerful. ^{in its medicinal effects} When chewed with

WONDERFUL POWER.

a little lime, it ^{is said to} enable men to do without food & sleep for days. By it they are enabled to ascend steep mountains. ^{without getting out of breath.} These statements are made by Humboldt and others, and although

EXCESS.

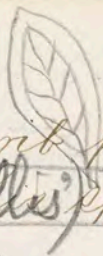
^{probably} somewhat exaggerated, have no doubt some foundation. Excessive consumption of it is injurious. Coqueros - ^{sots.} $\frac{1}{2}$

PROF. JACKSON.

Prof. Jackson imported some but was disappointed in their not producing the desired effect. It is doubtful if they really were the coca leaves. On the under

* Truth, on all subjects, ^{at all times,} ~~is always~~ is the best thing,
not only to hold but to advocate. ~~and teach.~~ By
asserting what Science cannot justify and experience does
not prove, about alcohol, ultra men ^{have} rather hurt than helped
the cause of temperance. Let us examine briefly
yet carefully what ^{has been} ~~is~~ proved to be true on the subject.

near the edge of the leaf.



side there should be a rib parallel to the mid-rib. In none of (Ellis) specimens, was this present.

RESINOUS &
UNCRYSTALLINE
PRINCIPLES.

Coca contains an ^{odoriferous} resinous and an un-
crystallizable principle; also tannic acid. ^{probably nutritious}
It is used by ten millions of people.

ARSENIC.

COACHMEN.

As a curiosity of diet, may be ^{Rare} men-
tioned ^{the taking of} arsenic ^{habitually as of Stimulant.} In Syria it is eaten
daily to improve their condition. Coachmen
sometimes give it to their horses, to make
them sleek. Ladies ^{By some people} take it to give themselves
a good complexion. Mountaineers eat it
to enable them to climb mountains. If
its use is stopped suddenly, it endangers
life. ^{2 or 3 grains a day are} ^{is said to depress very much, & even to}
But the most important article of ac-
cessory food is alcohol. ^{It must do harm in the end.}

ALCOHOL

ITS
POWER.

It is so power-
fully ^{an agent} that many think it would be a bles-
sing if it could be annihilated; while
many medical men would rather do
without ^{all the rest of the Materia Medica} any other medicine than it.

DIFFERENCE
OF
OPINION

Extreme ^a ~~extremism~~ ^{is possible} would sweep it out of exist-
ence. This is ^{surely} not a sound view. [Expand]
The composition of alcohol would lead

$$\begin{array}{r} 24000 \\ 4500 \\ 100000 \\ 1000000 \\ 10000000 \\ 100000000 \\ 1000000000 \end{array}$$

$$\begin{array}{r} 140 \\ 140 \\ 140 \\ 140 \\ 140 \\ 140 \\ 140 \end{array}$$

$$\begin{array}{r} 1000000 \\ 10000000 \\ 100000000 \\ 1000000000 \\ 10000000000 \\ 100000000000 \\ 1000000000000 \end{array}$$

$$\begin{array}{r} 450 \\ 250 \\ 12500 \\ 9000 \\ 102500 \end{array}$$

as already said,

We use [^] much more food for
 force than for tissue. Those who die of
 starvation perish much sooner than they would
 from mere disability of ~~the organs~~ from waste of tissue.
 Every beat of the heart, every lift of the chest
 in breathing, every peristaltic contraction of the
 stomach & intestinal canal consumes ^{force} ~~energy~~.
 That the force used in muscular effort is ^{450 foot-tons daily, "internal work,"} not generated
 directly by the change of the muscle-tissue has lately
 been shown; and experiments ^{recently} ~~made~~ ^{supplied by Dr. A. H. Wood,} ~~more~~ ^{more than given external.} ~~seen~~ ^{invol.}
 date the idea long entertained, that the amount of
 consumption of brain force in mental labor or exci-
 -ment may be measured by the amount of phosphates
 passed ^{from destruction of brain-substance.} in the urine. The blood probably, then, also furnishes
 nerve force by the change of its materials as
 well as muscle force, & organic force for the
 general vital actions of the body.

SWINDLE
IN
THIS STATE.

LONG
BOILING.

CHINESE
PREPARATION.

formed to make tea from a Penn-
sylvania plant. This plant does
not contain a particle of thein.

Long boiling drives off the aroma
which does not contribute much to nour-
ishment but gives a pleasant taste.

The Chinese pour hot water on leaves
in a cup and ~~then drink it~~ ^{The Russians also draw this tea but 2 minutes.}

For family use, the water should
be boiling when the tea is put in-
to it. ^{even without boiling,} Standing ~~draws out more of the strength, but, unless covered,~~
causes loss of aroma. Lecture IX.

TEA, COFFEE
AND
COCOA.

TEA

ENGLAND,
HOLLAND,
RUSSIA,
CHINA.

COFFEE

FRANCE,
GERMANY,
TURKEY,
EGYPT.

COCOA

ITALY,
SPAIN,
CENTRAL
AMERICA.

The most universal beverages are
tea, coffee, and cocoa. In England
Holland and Russia, ^{most} tea is used;
in France, Germany, ~~and~~ Turkey,
^{of the United States} coffee; and in Italy, Spain, and Cen-
tral America, cocoa. Half the human
race drink tea of China. ^{Comes in too soon}

1869

THEIN.

There is ^{or more} ~~1~~ per cent-
of thein; about 10 grs. to an oz. By it-
self, that quantity is poisonous.

TEA
NOURISHING.

Tea is also ^{with its gluten & starch} nourishing, but as we
use it we get very little good of this

End of 10th Lecture, X

1867; 1868

America 1868

Europe alone 300 mill. lbs per

mill. pounds
annually



Coffee was unknown to the

Greeks & Romans. Some authorities as-

sent it to be a native of Abyssinia;

it is still found wild from Caffa in India

to the borders of the Nile. Writers say

that its use was first suggested

the prior of an Arabian monastery,

who was told by a goat-herd of the effect

of excitement it produced on goats

browsing on its berries. He thought it

might help to keep his monks awake

over their devotions; & found it available in that way.

A Turkish merchant (Dan. Edr.) introduced it into England

End of 8th Lecture on Alimentation, 1871
18th of the Course.

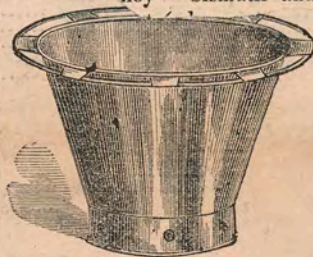
1652;
Soliman
Aga Turkish
Ambassador
to France,
into Paris, 1669.

Now, 100 million of men use it.

Kola or Gura nut of Jordan & Arabia has them wild. Natives chew it & swallow the juice. (Small & Cottrell)

boy seemed to quiver with its eager life. His audience took fire with him, and every face was flushed. Whatever might be the after-thought or the after-pursuit, each hearer, for the time, shared his zeal and his delight."

SPONTANEOUS DECOMPOSITION OF AN ALLOY OF LEAD.—It appears that at the University of Munich, there are preserved some copies of medals of an alloy—bismuth and lead



DAIRMEN have long been in want of a more practical and less expensive Strainer, which we are now prepared to offer.

enteric fever, and the mesenteric glands and spleen were in these enlarged. The

of a shrub about 10 feet high, and without deposit as in enteric fever, and the mesenteric glands and spleen were in these enlarged. The Tasmanian tea is made from several plants. It is used by the people of Tasmania, exclusively. (Family, Myrtaceae).

Labrador tea is made from two plants,
Coffee is used by one hundred
millions of men. The best is from Mocha
in Arabia. The next is Java coffee.

It is the seed or berry of the Coffea
Arabica plant. The trees bear for 20 years.
Coffee improves by keeping.

Roasting alters the character and even the constituents of coffee. It is probable that the oil after roasting, is not the same as before roasting.

CHANGE WHICH
TAKES PLACE
IN ROASTING.

1872-3

The annual consumption of coffee, per head, in various parts of the world is as follows: England, $1\frac{1}{2}$ pounds to each person; France, $2\frac{1}{2}$; Germany, 4; Denmark, $5\frac{1}{2}$; Switzerland, 6; Belgium, $8\frac{1}{2}$; Holland, $10\frac{1}{2}$; United States, 7 pounds; but in California, which appears to "beat all creation" in this as in so many other things, it amounts to $16\frac{3}{4}$ pounds, or excluding Chinese and Indians, who do not drink coffee, to $20\frac{1}{2}$ pounds. — F

1867; 1868

mill. pounds annually

Coffee was unknown to the

Greeks & Romans. Some authorities as-
sert it to be a native of Abyssinia;
it is still found wild from Caffa in Arabia
to the borders of the Nile. Writers say
that its use was first suggested to
the prior of an Arabian monastery,
who was tormented by a goat-head of the effect
of excitement it produced on goats
brought on its berries. He thought it
might help to keep his monks awake
over their sessions; & found it available in that way.

A Turkish merchant (Dan. Elmadj) introduced it into England

End of 8th Lecture on Alimentation, 1871
18th of the Course.

1652;
Soliman
Aga Turkish
Ambassador
to France,
into Paris, 1669.

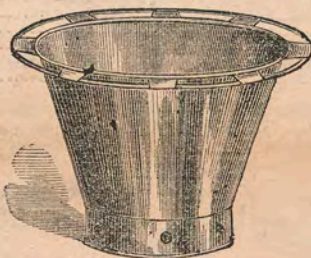
Now, 100 million of men use it.

* Kola or Gum nut of Jordan &
Arabia has them in it. Native when it is
smaller the price.

10

SHERWOOD'S

DAIRY STRAINER.



DAIRYMEN have long been in want of a more practical and less expensive Strainer, which we are now prepared to offer.

and without deposit as in enteric fever, and the mesenteric glands and spleen were in these enlarged. The

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In South
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Paragu
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gent prin
Coffee
Engr
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of a shrub about
Tasmanian tea is made from several
al. plants. It is used by the people of
Tasmania, exclusively. (Family, *Murtaceae*).

Labrador tea is made from two plants,
Lepum ~~Coffee~~ *patulic* & *latifolia*
is used by one hundred
millions of men. The best is from Mocha
in Arabia. The next is Java coffee.

It is the seed or berry of the *Coffea*
Arabica plant. The trees bear for 20 years.
Coffee improves by keeping.

Roasting alters the character and
even the constituents of coffee. It is prob
able that the oil after roasting, is not
the same as before roasting.

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CHANGE WHICH
TAKES PLACE
IN ROASTING.

CONSUMPTION.

| | |
|--|-------------|
| United States and British Provinces..... | 218,000,000 |
| Germany..... | 185,000,000 |
| France and Switzerland..... | 125,000,000 |
| Holland and Belgium..... | 90,000,000 |
| Great Britain..... | 35,000,000 |
| Scandinavia..... | 30,000,000 |
| Russia..... | 15,000,000 |
| Other Countries..... | 15,000,000 |
| Total..... | 713,000,000 |

Before the Rebellion the use of coffee was rapidly increasing in the United States—the annual gain in consumption being about eight per cent., against two and a half in Europe; but during and since the war, in consequence of the high cost of the real, cheap substitutes have been and are extensively used, as must be manifest by the following statement of importations of coffee into this country for the years named:

| | |
|-------------------------------------|-------------|
| Importations in pounds in 1850..... | 145,000,000 |
| do. do. 1855..... | 190,000,000 |
| do. do. 1859..... | 234,000,000 |
| do. do. 1862..... | 80,000,000 |
| do. do. 1865..... | 104,000,000 |

* Kola or Surin nut of Jordan & Arabia has them out. Nations chew & swallow the juice.

to the benefit of man that its use was first suggested, the prior of an Arabian monastery, who was told by a goat-herd of the effect of excitement it produced on goats browsing on its berries. He thought it might help to keep his monks awake over their sessions; & found it available in that way.

A Turkish merchant (Dan. Edwards) introduced it into England 1652;
 End of 8th Lecture on Alimentation, 1871
 18th of the Course.

1652;
 Soliman Aga Turkish Ambassador to France, into Paris, 1669.

Now, 100 million of men use it.

Lecture, X
 67; 9/1868
 mill, lbs per
 annuallly
 over
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The Tartars
adding fat-
making a
In South Am
Paraguay
of their, vola
gent principle

Coffee leaves are ^{made into}
Brazilian leaves in some
Hijosima tea, or

of a shrub about 12
Tasmanian tea is
al. plants. It is used by the people of
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Arabica plant. The trees bear for 20 years.
Coffee improves by keeping.

Roasting alters the character and
even the constituents of coffee. It is prob-
able that the oil after roasting is not
exactly the same as before roasting.

Freeley will be
Democracy, not considerations, made twice
and whose wishes the Cincinnati Convention
has treated with disdain, must elect him if he
is elected at all. The Democracy, wholly un-
trammelled by the Cincinnati event, can view
the situation with results de-
termined.

other as a sup
These Stra
and are st
1862."

Call

Pathological Lesions in Acute Dysentery
which prevails at Sedan.—Dr. JOHN MUR-
RAY presented to the Pathological Society
of London, Oct. 18th, 1870. a number of
specimens of intestines affected by acute
dysentery, which he had brought from one
of the hospitals near Sedan. The large
intestines were greatly affected; the small
intestines to a limited extent. The mucous
membrane was swollen, tumid, deeply in-
jected, and covered with minute aphthous
patches. In the large intestine—especially
in the colon and rectum—the mucous mem-
brane was extensively and irregularly ulce-
rated, and patches, some not less than the
area of an adult hand had completely sloughed
away, leaving the muscular coat of the in-
testine bare. There was extravasation of
blood into the submucous tissue. Peyer's
patches were in some cases ulcerated, but
superficially, and without deposit as in
enteric fever, and the mesenteric glands
and spleen were in these enlarged. The

CHANGE WHICH
TAKES PLACE
IN ROASTING.

CONSUMPTION.

| | |
|--|-------------|
| United States and British Provinces..... | 218,000,000 |
| During the last | 185,000,000 |
| fiscal year, ending June 30th, 1871, there | 125,000,000 |
| were imported into the United States 317, | 90,000,000 |
| and 51,364,949 pounds of coffee, valued at \$30,902,869, | 35,000,000 |
| 251,017. The other Countries..... | 30,000,000 |
| Other Countries..... | 15,000,000 |
| Total..... | 713,000,000 |

Before the Rebellion the use of coffee was rapidly increasing in the United States—the annual gain in consumption being about eight per cent., against two and a half in Europe; but during and since the war, in consequence of the high cost of the real, cheap substitutes have been and are extensively used, as must be manifest by the following statement of importations of coffee into this country for the years named:

| | |
|--------------------------------|-------------|
| Imports in pounds in 1850..... | 145,000,000 |
| do. do. 1855..... | 190,000,000 |
| do. do. 1859..... | 264,000,000 |
| do. do. 1862..... | 80,000,000 |
| do. do. 1865..... | 104,000,000 |

to the barter of...
that its use was first suggested
the prior of an Arabian monastery,
who was told by a goat-herd of the effect
of excitement it produced on goats
brought on its berries. He thought it
might help to keep his monks awake
over their sessions; & found it available in that way.

A Turkish merchant (Dan. Smend) introduced it into England

End of 8th Lecture on Alimentation, 1871
18th of the Course.

1652;
Soliman
Aga Turkish
Ambassador
to France,
into Paris, 1669.

Now, 100 million of men use it.

* Kola or Gura nut of Jordan &
Arabia has them with. Native chew
smaller the juice.

Lecture, X
67; 1868

o. mill, lbs per
all, pounds
annually
stra

The Tartars
adding fat
making a
In South Am
Paraguay
of their, vola
gent principle

handle resting

other as a sup

These Stra

and are st

1862."

Call

Coffee leaves are ^{made into}
~~Erigeron~~ ^{vine} leaves in ^{Siberia}
~~Arjessinia~~ tea, or
of a shrub about 12

Tasmanian tea is
al. plants. It is used by the people of
Tasmania, exclusively. (Family, Murtaceae).

Labrador tea is made from two plants,
~~Coffea~~ ^{erigeron} ~~is used by one hundred~~
millions of men. The best is from Mocha
in Arabia. The next is Java coffee.

It is the seed or berry of the *Coffea*
Arabica plant. The trees bear for 20 years.
Coffee improves by keeping.

Roasting alters the character and
even the constituents of coffee. It is prob-
able that the oil after roasting is not
the same as before roasting.

two applications, made twice daily,
continued from 10 to 30 minutes, his powers
were restored.—*Révue de Thérapeutique*,
Sept. 1870.

Pathological Lesions in Acute Dysentery
which prevails at Sedan.—Dr. JOHN MUR-
RAY presented to the Pathological Society of
London, Oct. 18th, 1870. a number of
specimens of intestines affected by acute
dysentery, which he had brought from one of
the hospitals near Sedan. The large
intestines were greatly affected; the small
intestines to a limited extent. The mucous
membrane was swollen, tumid, deeply in-
jected, and covered with minute aphthous
patches. In the large intestine—especially
in the colon and rectum—the mucous mem-
brane was extensively and irregularly ulcer-
ated, and patches, some not less than the
area of an adult hand had completely sloughed
away, leaving the muscular coat of the in-
testine bare. There was extravasation of
blood into the submucous tissue. Peyer's
patches were in some cases ulcerated, but
superficially, and without deposit as in
enteric fever, and the mesenteric glands
and spleen were in these enlarged. The

CHANGE WHICH
TAKES PLACE
IN ROASTING.

Guarana a Substitute for Tea—A late number of the "Pharmaceutical Journal" contains a paper on "Guarana," the seeds of a *sapindaceous* tree—the *Paullinia sorbilis*—which does not appear to have hitherto entered into European commerce. The guarana-yielding tree is found abundantly in the Amazonas. The fruit is scarcely as large as a walnut, and contains five or six seeds, which are roasted, then mixed with water, and moulded into a cylindrical form, resembling a large sausage, and finally dried in an oven. Before being used it is grated, and then resembles cacao. Two spoonfuls of the powder are mixed in a tumbler of water, and this drink, is regarded as a stimulant and nerve tonic. Like strong tea or coffee, it is said to take away the disposition to sleep. The active chemical principle is an alkaloid that Dr. Stenhouse has shown to be identical with theine. Guarana contains ~~more~~ *than* double as much of this alkaloid as good black tea, and five times as much as coffee, the proportion being 5.07 per cent. in guarana.—Lancet, Oct. 22, 1870.

.....218,000,000
185,000,000
125,000,000
90,000,000
35,000,000
30,000,000
15,000,000
15,000,000
713,000,000

idly increasing in being about eight during and since real, cheap substitute be manifest by into this country

.....145,000,000
100,000,000
234,000,000
80,000,000
104,000,000

Lecture, X
 567; 568

mill, lbs per
 mill, pounds
 annually

extra

over

first suggestion
 the prior of an Arabian monastery,
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End of 8th Lecture on Alimentation, 1871
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 into Paris, 1669.

Now, 100 million of men using

* Kola or Gum nut of Jordan
 Arabia has them wild. Native of
 smaller the price.

The Tartars
adding fat-
making a
In South Am
Paraguay
of their, vola
gent principle

handle resting upon one side and the knob upon the other as a support.

These Strainers are made in Tin and Silver Plate, and are stamped "Sherwood's Patent, Nov. 18, 1862."

Call for Sherwood's Handle Strainers.

Coffee leaves are ^{made into a tea} eaten in Java. ^{anyone is.}
^{Erigerone vine. Leaves in some varieties "pink" & "purple."}
^{Hyposmia tea, or "Chai,"} is the leaf
of a shrub about 12 ft. high. ^{Catha edulis.}

Tasmanian tea is made from several plants. It is used by the people of Tasmania, exclusively. (Family, Myrtaceae).

Labrador tea is made from two plants, ^{Leptocarpus} ^{erectus & latifolius}
Coffee is used by one hundred millions of men. The best is from Mocha in Arabia. The next is Java coffee.

It is the seed or berry of the Coffea Arabica plant. The trees bear for 20 years. Coffee improves by keeping.

Roasting alters the character and even the constituents of coffee. It is probable that the oil after roasting is not exactly the same as before roasting.

CHANGE WHICH
TAKES PLACE
IN ROASTING.

The following tables, copied from the "American Cyclopædia," show approximately, at the time of publication, the amount of coffee, in pounds, produced by the several coffee-producing countries and also the consumption in others:

| PRODUCTION. | |
|--|-------------|
| Brazil..... | 400,000,000 |
| Java..... | 140,000,000 |
| Ceylon..... | 40,000,000 |
| St. Domingo..... | 40,000,000 |
| Cuba and Porto Rico..... | 25,000,000 |
| Sumatra..... | 25,000,000 |
| Venezuela..... | 25,000,000 |
| Costa Rica, British West Indies and Mocha..... | 18,000,000 |
| Total..... | 713,000,000 |

x Soliman Aga, Turkish Ambassador to France, introduced it into Paris 1669.

drink, is regarded as a stimulant and nerve tonic. Like strong tea or coffee, it is said to take away the disposition to sleep. The active chemical principle is an alkaloid that Dr. Stenhouse has shown to be identical with theine. Guarana contains more than double as much of this alkaloid as good black tea, and five times as much as coffee, the proportion being 5.07 per cent. in guarana.—Lancet, Oct. 22, 1870.

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End of 8th Lecture on Alimentation, 1871
18th of the Course.

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Now, 100 million of men use it.

* Kola or Surin nut of Jordan Arabia has them not. Natives of Sallee the price.

Lecture, X
167; 1658

small, the price
all, ponds
annually

extra

The Tartars boil it for a long time, adding fat- and ^{salt} other articles, thus making a nourishing drink, ^{20 or 30 cups} a day.

In South America, the leaves are eaten.

^{or} Paraguay tea, has about $1\frac{1}{4}$ percent of thein, volatile oil, gluten, & an astringent principle. ^{It is a} Holly-like plant; ^{the leaves are} ~~the leaves are~~ ^{made into a tea} ~~made into a tea~~ ^{used} in Java.

^{Erigeron} ~~Erigeron~~ ^{vine} leaves in ^{some} ~~some~~ ^{parts of Europe} ~~parts of Europe~~ is the leaf of a shrub about 12 ft. high. ^{Catha edulis}

Tasmanian tea is made from several plants. It is used by the people of Tasmania, exclusively. (Family, Murtaeae).

Labrador tea is made from two plants, ^{Leptocarpus} ~~Leptocarpus~~ ^{patens & latifolius} ~~patens & latifolius~~. ~~Coffee is used by one hundred millions of men.~~ The best is from Mocha in Arabia. The next is Java coffee.

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CHANGE WHICH
TAKES PLACE
IN ROASTING.

~~Both an original vol. arom. oil, &
a compound of oil & sugar~~

original volatile oil of green coffee is ^{the amount} ~~than~~ ⁱⁿ tea.
The ⁱⁿ smaller amount of oil 1/100 in tea,

1/50000 in coffee. The mode of preparation of the be-
haviour of coffee is no doubt influential ^{in modifying its effects upon the system.} More coffee
^{at a time} used than tea — the former is the stronger hot infusion?

For persons in full health.

Coffee probably acts most upon

the ^{Spinal} ganglionic nervous system:

Tea more in proportion on the brain.

Some constitutions feel coffee much more
injurious than others. Sanguine temperament most,
or sanguine-nervous. The nervous when exhausted bears
it well. Fibrous temperament feels it least.

Roasting
alters the

IEBIG'S MOD-
PREPARATION OF
COFFEE.

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EFFECTS OF
COFFEE.

EXCITING,
INCREASE
CIRCULATION,
ANTI-SOPORIFIC.

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INCREASES
PRESSURE
OF THE HEART.

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star

PALPITATION.

increases (1873) forms caffeine
first to increase, & then in persons
diminish action of heart in anxiety
UREA

palpitation caused by coffee. It is known
that coffee is not a desirable drink.
Lehman's experiments on the secretions, showed that coffee causes a decrease in the urea passed. This fact has an important bearing on medicine & diet.
The effects of coffee in retarding tissue-change do not depend altogether

Personne is said to have
proved that in roasting
coffee, half its caffeine
is lost, or at least
transformed into methyl-
amine (C_4H_5N). Giving
acetate of methylamine to
patients, he found it to
increase arterial ten-
sion, and sometimes to
cause irregularity of
pulse. (Brit. Assoc.
Med. Cong. Rev. Oct. '89.)
Albert denies the loss of
caffeine in roasting coffee.

~~and vol. arm. vid, &
for roasts~~

in coffee is ^{the amount} ~~than~~ ⁱⁿ tea,
but ~~not~~ ^{1/100} in tea,
of preparation of the be-
st ~~effects upon the system.~~ ^{essential} ~~More~~ coffee
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of coffee in retarding tissue-change
The effects do not depend altogether

① Mocho Coffee best
grain small, dark yellow,

Nest, Lana, larger, pale yellow

Rio, from Brazil, greenish or
bluish gray

Coffee the seeds or berries of Coffea Arabica, the
Coffee tree, for 8 to 20 ft in height

South Sea seeds one of the Camellia.

A tree will bear for 20 years.

The fruit is red, like cherries, when ripened.
The grains improve with keeping; poor

quality thus approaching the fine.

Liban Coffee - another species?

Ted more in proportion on the brain,

Some constitutions feel coffee much more
injurious than others. Sanguine temperament most,
or sanguine-nervous. The nervous when exhausted bears
it well. Fibrous temperament feels it least.

Roasting (which should never be burning, as that chars & partly destroys) 185-
alters the flavor & actually ^{also somewhat} the chemical character of coffee.

LEBIG'S PREPARATION OF COFFEE.

Lebig prepares coffee so as to keep ^{some of} its oil unchanged. He ^{advises} roasting $\frac{3}{4}$, and boiling it. Just before the boiling ~~is~~ done, ~~the~~ put in $\frac{1}{4}$ unroasted.

CAFFEIN

Coffee contains caffein, isomeric with thein, (but in a ^{more variable} ~~smaller~~ ^{larger} proportion). It also has ^{a volatile oil, which is more powerful than that of tea, & is more volatile.} volatile oil which is more powerful than that of tea.

VOLATILE OIL.

EFFECTS OF COFFEE.

EXCITING, INCREASE CIRCULATION, ANTI-SOPORIFIC.

The effect of coffee ~~on~~ the system ^{is} an agreeable excitement. It ^{increases} the circulation. When we want to keep awake, there is nothing ^{more} ~~more~~ ^{of Bernard,} intellectual.

It has been found by experiments, that coffee increases the pressure of the heart ^{more} than any other substance. This may explain ^{palpitation} caused by coffee. It shows that coffee is not a desirable ^{common} drink.

Lehman's experiments on the excretions, showed that coffee causes a decrease in ^{the} urea ^{passed.} This fact has an important bearing on medicine & diet.

^{of coffee in retarding tissue-change}
These effects do not depend altogether

increases pressure of the heart. PALPITATION. UREA first to increase, then diminish action of heart. (1873) some caffeine also, in persons with heart trouble.

Perhaps some other ingredients whose nature & action
 may be not well understood. ^{as before said,} ⁱⁿ ^{the}
 preparing coffee from the seeds, more strength of the material
 is obtained than in making tea of the leaves. I believe
 tea to be more of a cerebral & coffee a ganglio-spinal
 stimulant.

Depression an hour or two after breakfast;
 sense of impending calamity or loss —

the famous clerical note of England,
 Sydney Smith, thought that

"improved the understanding". In Jas. Mackintosh, a fine thinker & writer,
 the same opinion; but they were neither of them physiologists.

Physicians & sanitarians.

Coffee good for epileptics.
 Escherichia.

Probably for advanced cases
 if the observation be chiefly correct.

COMPOSITION
OF
ALCOHOL.

us to suppose that it was ^{almost only} food for force. It has no nitrogen, but carbon, oxygen, and hydrogen. It also contrib-
utes to the fatty tissue. ^{many for these elements} If ^{having} added some-
thing nitrogenous it ^{may} assist the ^{formation of} ~~other~~ higher
tissues.

HOW FAR IT
WILL
SUPPORT
LIFE.

One can live longer on ^{alcohol} & water than on water alone. A woman ^{under my care} lived 2 weeks on brandy & water. ^{survived 4 weeks!} Cornaro, wine daily. See Crutcher.

EFFECTS OF
ALCOHOL.

EXHILARATION

Dr Johnson.

The first effect of alcohol, is exhilarat-
ion. It increases the hilarity of the drink-
er. Dr. S. Johnson said, ^{very honestly, that he did not &} he would not like
to be deprived of his glass of wine. ^{daily} The
exhilaration is ^{at dinner, if he took a} not an exaltation; it is

EXHILARATION
DEBASING
NOT
EXALTING.

^{after} just the reverse. An old proverb says:
"When ^{the} wine is in, ^{the} wit is out." The reason
why men laugh more at a dinner with
wine is because they are ^{in a mood to be} more easily a-

SPEECHES

mused. Speeches made at dinners, have
^{actually} been best, ^{when} the dinner was a
cold water one; although those ^{made over} ~~at~~ the wine
table produce more laughter & applause.

INTOXICATION

The next state ^{that follows} is intoxication; ^{beyond} aphren-
zy, in which the drinker is out of his own control.

196
 Sep 22 5 226

To Board

Physical Effects of Alcoholic Excess.

Delirium Tremens

Gout

Chronic Alcoholism

e.g. - Cirrhosis of liver - Fatty Degeneration of liver -
 Atherosclerosis of arteries - Bright's Disease of kidneys, &c.

Alcoholism

Other Disorders

Impairment of health of offspring.

Symptoms:
 ^

* Met gout is uncommon in the
 Rhine region.

French wines (Bordeaux) more arthritic?
 (Mrs Hirschfeld).

~~Headland~~ ~~it~~ call it a stimulant, but an
 inebriant narcotic.

* Anstie says

assent

to the

common use
 of language in regard to it. So do Parkes

and B. W. Richardson. ~~and that~~ It is either a lost
 accord to the mode & amount of use.

End of 11th Lecture, 1873.

COMA.

PUPIL DILATED.

The last stage ^{of fall} is coma, or dead-drunkness. The pupil ^{is generally} ~~is~~ dilated; being ^{in this} opposed to opium, in which it is contracted.

DELIRIUM TREMENS.

Delirium tremens is ~~the~~ effect of continued excess. This is ~~generally~~ ^{often} fatal, ^{often} at the first attack; more frequently ^{in the second attack}.

GOUT.

Another effect ^{is probably} is Gout. Alcohol ^{in moderate amount} stimulates digestion and assimilation. Too much nitrogenous food ^{may be. this} ~~is~~ ^{is} ~~not~~ ^{is} sufficient. The ^{excretion of nitrogenous matter} ~~oxidation~~ ^{is} not sufficient. Thus uric acid is formed in excess, and, in being thrown off ^{or elsewhere} ~~in~~ the joints of the toes ^{causes} ~~causes~~ gout.

ITS CAUSE.

The strongest alcohols do not ^{often} cause gout; It is ~~mainly~~ ^{mainly} the wines & beers.

GENERAL DETERIORATION OF TISSUE.

When ~~none~~ ^{such} ~~these~~ diseases is ~~produced~~ ^{produced}, there is often a deterioration of all the organs of the body; as liver, heart, &c. ^{chronic alcoholism} ^{intemperance worst of all}.

SMALL DOSE.

Alcohol is stimulating to the circulation, and to the nervous system, ~~*~~

LARGE DOSE.

In large doses it is oppressive and narcotic. There is a great difference between a large and a small dose. The importance of proper doses, is much

End of 10th Lecture, 1870.

+
Is alcohol appropriated, or passed through unchanged? (Experiments (Lullmann)) pro & con. Aldehyde (Duchek) - Partly excreted & partly decomposed. Varying with amount & circumstances. When narcotism occurs, no appropriation. It is, I think, probable, that the conditions in which alcohol does good in disease are, those in which excessively rapid oxidation is going on; as in the over-combustion, ^{the} pyrexia, of low fevers. Then, the carbon & hydrogen of the alcohol, given in small amounts, may be oxidized, saving the blood & tissues; but if the amount of alcohol be more than can thus be used, - it remains ^{and} in the blood as alcohol, & narcotizes the brain.

In health, alcohol, in ^{or even moderate} large doses, lowers the temperature of the body. (Wunderlich, &c.) ^{1° in 15 min}
Tea and Coffee increase temperature. [See my Watson] ^{from 1 or 2 parts per cent, last 1 or 1/2 hour.}

Examples: opium, & bitters.

199

neglected. Dr. of the utmost consequence in using stimulants.

ALCOHOL RETARDS
CHANGE OF
TISSUE.

ACTIVE
CHANGE

PASSIVE
CHANGE.

EXCESSIVE
WASTE.

Alcohol retards the change of tissue. Dr. Hammond, who tried it on himself,

found that less ^{under regular diet} were given off.

lardaceous desirable ^{tissue} of change. 1st. T

of muscle or br the system. Stim

alcohol makes th ^{in the stage of excitement} muscle

2ndly. Passive wa sleep & wakeful

even in ^{some} hybern shown by their

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sickness. This like morphia, q

When this wa ten the case as

health, stimulants ^{proper} may explain the use of tea & coffee and alcohol

Therefore, there is a ^{limited proper} place for alcohol,

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End of 23rd Lecture, 1872.

End of 10th Lecture, 1870.

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End of 23rd Lecture, 1872.

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10th Lecture, 1870.

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Schulz, Dupré & Anetie are
admitted by Parkees to have essentially
reputed & allennand about non destruction
of alcohol (accents by L.) in the body.
[See Richardson, Chem Age, April 1872.]

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Examples: opium, - Bitters.

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End of 23rd Lecture, 1872.

EXCESSIVE
WASTE.

Alcohol retards the change of tissue. Dr. Hammond, who tried it on himself, found that less urea and carbonic acid, ^{under regulated daily portions of it.} were given off. ^{here} The question is, is this retarding desired? ^{two kinds} of change. 1st. of muscle or the system. Alcohol makes ^{in the stage of excitement} Endy. ^{Passive} sleep & wakefulness even in ^{some} high shown by the end of the week. This waste is sickness. This like morphia. When this ^{proper} ten the case health, stimulants ^{proper} may explain the use of tea & coffee and alcohol. Therefore, there is a ^{limited proper} place for alcohol, ^{exceptionally}

The members and attenders of Twelfth Street Meeting, are invited to a READING MEETING, to be held at M. C. Conner's No. 1312 Filbert Street, on Third day Evening, Second month, 13th, 1872, at 7 1/2 o'clock.

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Drs. E. Smith, Snow & Davis; Lallemand, Poirou & Duroy & Poirou are quoted as asserting an experiment that alcohol is not directly oxidized in the blood.

Böcker & Moleschott, that it is partly excreted unchanged, & partly "burned" in the blood.

Duchek, that it is changed to aldehyde & given off.
(Point, that CO_2 in breath is first diminished, afterwards much increased)

-rexia, of low fevers. Then, the carbon & hydrogen of the alcohol, given in small amounts, may be oxidized, saving the blood & tissues; but if the amount of alcohol be more than can thus be used, — it remains ^{and} in the blood as alcohol, & narcotizes the brain.

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that the conditions in which al-
tase are, those in which excessively
ing on; as in the over-combustion, ^{the} ~~the~~

or even moderate

In health, alcohol, in large doses, lowers
the temperature of the body. (Wunderlich, &c) ^{1° in 15 min}
Tea and Coffee increase temperature. [See my Watson] ^{from 1 or 2 parts beer, 1 or 1 1/2 hour.}

Examples: opium, - & bitters.

neglected. Dr. of the ^{almost} consequence in using stimulants.

ALCOHOL RETARDS CHANGE OF TISSUE.

Harley says Alcohol lessens uric acid, increases uric acid.

ACTIVE CHANGE

PASSIVE CHANGE.

End of 25th Lecture, 1872.

EXCESSIVE WASTE.

Alcohol retards the change of tissue. Dr. Hammond, who tried it on himself, found that less urea and carbonic acid, ^{under regulated daily portions of it.} were given off. ^{here} The question is, is this retardation desirable? There are two kinds of change. 1st. That produced by action of muscle or brain, the wear & tear of the system. Stimulants increase this; alcohol makes the pulse beat faster; ^{in the strong & excited muscular activity of the increased; though not later.} 2ndly, Passive waste; which goes on in sleep & wakefulness, sickness or health; even in ^{some} hibernating animals; as is shown by their weighing less at the end of the winter than at the beginning. This waste is variable. It is ^{more rapid} faster in sickness. This it is that alcohol retards, like morphia, quinine, coffee, &c. Toning up?

When this waste is excessive as is often the case as very few have perfect health, stimulants ^{proper} ~~may be used~~ ^{may be used}. This may explain the use of tea & coffee and alcohol.

Therefore, there is a ^{limited proper} ~~place~~ ^{exceptionally} place for alcohol.

* and Physicians have a serious responsibility in advising it — to do it always judiciously with proper limitations — so as not to do harm.

Examples — Carstairs — London Dispensary advice. Whisky fashion now; London Saturday Review about Ladies in England (1870-1).
End of 11th Lecture 1867/8

"Medical Declaration"
of 300 British Physicians
1871.

10th, 1868.

10th, 1869.

See Report of Am. Assoc.
of Sup. of Ineb. Asylums —
for 1872.

9th on intemperance, 1871-19th of the Course

Is intemperance a crime, or a disease? Mostly both.

some say for 20
population paupers; — (if pauperism is
more due to drunkenness than
anything else)

1 in 11 man drunkard in England?

1 in 100 in U.S.?

The late
Dr. Anstie, one of the editors of the London Practitioner,
author of a very able book on "Stimulants & Narcotics" asserts the opinion
that from an ounce to an ounce and a half of alcohol taken
in some form daily, will be beneficial as an anorectic to an adult
in health. I do not agree with him. Healthy need none
whatever they may tolerate. without any at
all. Dr. Parkes advocates this conclusion.

End of 12th Lecture, 1873

DR. RAY'S
ADVICE.

FALSE
ARGUMENT.

even out ^{side} of the sick-room. It is safe in not
Dr. Ray says that ~~a~~ man ~~should~~ take
alcohol unless advised by a physician.
~~Tetters~~ often say alcohol does no good.
This ~~only~~ injures their cause, as the
~~only safe way is truth.~~

Precisely the same principles apply
to alcohol as to coffee; but as it is a
much ~~more~~ ^{the risk, attending its use is far greater.} disturbing agent, ~~the number which~~
~~requires to use it, is a minimum.~~

COLD WATER THE
NATIONAL
DRINK OF
THE U.S.

The United States is ^{almost} the only ^{highly civilized} country
where cold water is the national drink.
In Southern Europe wine, and in
Northern Europe ^{beer} spirits, take its
place. ^{In Paris, 7 millions wine per sou,} in a year it has been.
Beer is used in Germany and
England, ^{very} largely.

EXCESS
IN
ENGLAND.

In the latter country there is a la-
mentable excess taken. Quite lately, there
has been an improvement. (Tom Brown
at Oxford" mentions a pint of beer as
^{young college} a student's daily allowance.)

AMERICANS
TEMPERATE

The Americans are ^{on the whole} the most temperate
^{people} in the world, ^{in the world} ~~in the world~~.
Only those who are advanced in years,

* and Physicians have a serious responsibility in advising it — to do it always judiciously with proper limitations — so as not to do harm.

Examples — Carstairs — London Dispensary advice, whisky fashion now; London Saturday Review about ladies in England (1870-1).
End of 11th Lecture 1867/8

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[9th Alimentation, 1871-19th of the Council

Is intemperance a crime, or a disease? Mostly both.

more due to drunkenness than anything else

1 in 11 of population paupers; — (4th pauperism is more due to drunkenness than anything else)

1 in 100 in U.S. ? —

The late Dr. Anstie, one of the editors of the London Practitioner & author of a very able book on "stimulants & narcotics" asserts the opinion that from an ounce to an ounce and a half of alcohol taken in some form daily, will be beneficial as an anorectic to an adult in health. I do not agree with him. Healthy adults are best without any alcohol whatever they may tolerate, need none, & without any alcohol.

1873

End of 12th

then conclusion.

even out of the sickroom. ^{side} safe in not

DR. RAY'S
ADVICE.

Dr. Ray says that ~~as~~ man ~~should~~ take
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This only injures their cause, as the
only safe way is truth.

Precisely the same principles apply
to alcohol as to coffee; but as it is a
^{much more} ~~very~~ disturbing agent, ^{the risk attending its use is far greater.} ~~it must be used with~~
~~caution~~ ^{it must be used} ~~cautiously~~ ^{at}
~~requires to use it~~ ^{almost} ~~as a minimum.~~ ^{highly civilized}

COLD WATER
THE
NATIONAL
DRINK OF
THE U.S.

The United States is the only country
where cold water is the national drink.
In Southern Europe wine, and in
Northern Europe ^{beer} spirits take its
place. ^{In Paris, 7 millions wine per soul, in a year it has been.}
^{Beer is used in Germany and}
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at Oxford" mentions a pint of beer as
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AMERICANS
TEMPERATE

The Americans are the most temperate
^{on the whole} ^{in the world.} ^{in the world.}
^{Only} those who are advanced in years,

Foreign Beverages

| | | |
|--------------|-------------|--------------------|
| Malays, &c. | "Arrack" | "From Rice or Arca |
| Greeks &c. | Raki | Rice |
| Hindus | Toddy | Cocoa-nut Palm. |
| " | Murwa | Millet |
| Arabians &c. | Boozek | Millet |
| Russians | Quass | Rye |
| Poles, &c. | Vodki | Potato |
| Chinese | Samshoo | Rice |
| Japanese | Sacie | Rice |
| Breejes | Ava | Long Pepper. |
| S. Americans | Chica | Maize |
| Mexicans | Pulque | Agave |
| " | Aguardiente | Agave Cane |
| West Indians | Guarapo | Mugwort |
| Tartars | Koumiss | Mare's Milk. |

WHO
SHOULD USE
ALCOHOL.

or have feeble constitutions, or are over-
worked, or underfed, can with safety
take alcohol. ^{Then only in carefully and properly regulated quantities.}

But, as physicians, ^{we must} look into this matter yet farther.

USE OF
ALCOHOL IN
SEVERE
BURNS,
HEMORRHAGE,
TYPHUS & TYPHOID
FEVERS,
AND
CONSUMPTION.

It is admitted that alcohol is in-
dispensable ^{sometimes in the treatment of medicine} in the case of severe burns,
hemorrhages, typhus & typhoid fevers, and
consumption. ^{How it acts we cannot}
tell. ~~But~~ ^{it} has an important bearing
on both hygiene and medicine.

OLD LAW
OF
STIMULATION

The old law of stimulation was
that every stimulant is followed by a
corresponding depression. If this
were true stimulants would ^{have to} be ban-
ished altogether. Thus suppose a man
to be 1° above death and takes a stim-
ulant which raises him to 2°. If this
law were true he would fall back to 0°
or death. This is ridiculous, of course.

ILLUSTRATION
OF
ITS ABSURDITY

AGAINST
PHYSIOLOGICAL
EXAMPLES.

These are physiological reasons
ⁱⁿ ~~in~~ ^{favor} of stimulation. ^{we begin by normal vital stimulating all the time.} The first
breath which a child takes is caused
by cold air stimulating the surface.
The circulation of the blood, respiration,

There are, indeed, four different effects,
not differences in degree of the same action,
 which alcohol may produce, according to the
Dose and circumstances of its administration.

1st simply stimulant; with small doses.

2nd what Dr. Chambers calls an anæsthetic action;
 more exactly, if there were such a word,
hypæsthetic. (Describe & illustrate.)

Against excessive friction or work - overfatigue -
 & in some cases of insomnia, &c.

3rd inebriant - intoxicating; i.e., causing an active,
 & either foolish or violent temporary delirium;
 which we call being drunk.

4th hypernarcotic; producing dead-drunkness or Coma,
 which may be fatal at the time.

Children are sometimes so poisoned to death
 (Such a case in 1876 in Philadelphia)

and in fact nearly every ^{in the body} ~~action~~ ^{stimulus} is carried on by stimulation. Therefore ^{has been} ~~this law~~ ^{necessarily} modified and we now have

NEW LAW.

The ~~two~~ law; all stimulation of an organ beyond ~~the~~ normal degree, is followed by a ~~depression~~ corresponding to the excess: but a stimulation which carries ^{only up to or towards the normal line or level}

HAS ALCOHOL A TENDENCY TO PRODUCE INTEMPERANCE?

~~An important question in hygiene~~ is, is there any inherent property in alcohol, to produce intemperance? does the sick man who takes alcohol, ^{always} ~~the~~ ^{run a} danger of ~~producing~~ becoming a drunkard? It has ~~no~~ ^{tendency} such inherent tendency. This depends on excess, growing out of the depression consequent on excess.

WHAT IT DEPENDS ON.

TYPHUS FEVER.

There are those, who, though not sick, are weak, and these need stimulants. In typhus fever, the patient is ^{often} ~~fed~~ ^{of doses} every hour on alcohol, and yet on recovering feels no disposition to become intemperate. In this condition, it does not produce intoxication. A young officer brought ^{for days or weeks together} ~~to the hospital~~ ^{home by rail}

Protest against Stimulism:

1. All involves 3 properties:
 1. See disease is debility.
 2. See debility requires stimulants.
 3. Alcohol is always the best stimulant.

Then consider the conditions under which, exceptionally, dilute or mild alcoholic beverages may sometimes be properly advised, ^{outside the sick room.}

1. Old age,
2. feeble constitutions, (original)
3. Overworked - unable to feed up well -
4. Convalescents, ^{feeble} dyspeptics, &c.

Always regulate quantity, - &
 never forget the dangers.

issue were greatly thickened.

He stated that it was presumable that the animal had been slaughtered within a brief time after being infested. It had been ascertained by experiment that from one to three months must elapse before the capsules become opaque.

Portions of this same ham, which had been cured and smoked, were eaten uncooked by a family at Harrisburg, all the members of which were taken violently ill upon the third day, one of the cases terminating fatally in less than a week's time. The communication received did not state what symptoms the patient had presented, but generally, in those rare cases where the disease proves so rapidly fatal, there is violent gastroenteritis, with more or less pronounced peritonitis. Usually trichinosis assumes a much slower progress, giving rise to intense muscular pains and cedema, simulating muscular rheumatism.

Dr. DE F. WILLARD presented the specimens from a case of *chronic tubercular pleurisy with large effusion*, from A. B., male, 28 years of age; admitted to the Presbyterian Hospital May 23, 1874. Walked to the hospital, and did not complain of much fatigue. The only history gleaned from him was to the effect that he had had what he called an attack of "pneumonia" (undoubtedly pleuro-pneumonia) about three months previously, which detained him in bed for several weeks. His health had been failing for some months previous to this attack, but since that he had been totally unfit for work, although he has not been under a physician's care. On admission, his left thoracic cavity was found full of liquid, but no further examination was made that night. The next day he was seized with violent dyspnoea, and died within less than twenty-four hours from the date of admission. Just before and immediately subsequent to death a large amount (a pint) of thin frothy fluid was

until he was given al-
like opium ^{under severe pain} in this re-
d by the system, its
ts are lost. A certain
tleman would, after
take alcohol ^{largely} for a
and when the neces-
ould have no inclina-
cases I have often known.
alcohol is excess to one
health. ^{excessively} Nor is it by any means always
needful in disease.
err in advising them.
They often ruin men.

by bad advice. They should remem-
ber their responsibility. Toddism - Stimulism.

The elements of danger of intemper-
ance are quantity, frequency, ^{age} and
time of day. The signs of excess are
an increase in the pulse a flushed
face, and an effect on the brain.

The danger from quantity does not
increase simply ^{in proportion to} but as the square
of the quantity. If a man takes
two glasses the danger of intemperance

QUANTITY,
FREQUENCY,
TIME OF AND
DRINKING.

SIGNS OF EXCESS.

QUANTITY.

The leading physiologist, W. B.

ALCOHOL. — As most of our readers know, Dr. Carpenter, of London, has been a most staunch advocate of "temperance." But he has been too much for himself, and has furnished Dr. Parkes an account of his own case for publication:

"After having been a water-drinker during all the earlier part of my life, and enjoying a fair measure of health and vigor, I broke down about ten years ago under the pressure of excessive work, and, besides a local disorder, I then suffered from a total loss of appetite and enfeeblement of the digestive power, so that my whole system was undergoing a rapid lowering. My medical friends recommended me powerful tonics, combined with three glasses of sherry daily, and on this regimen I improved even more rapidly than they expected, and was able in a month's time to enjoy a tolerable dinner, gradually reducing the quantity of wine I took with it. They had at first expected that I should be obliged to winter in the south of Europe; but I rallied so fast that this idea was soon abandoned, and I was able to return to my work after a three-months' absence. Ever since that time I have taken a couple of glasses of light claret with my dinner, and this fluid suits me very well. I often reach home very tired, and feeling as if I could eat nothing, and I am certain that without this little 'fillip' I should eat nothing. The question lies, therefore, in such cases, between the use of the slight alcoholic stimulus and the inadequate nutrition of the body, and I cannot myself doubt which is the least of what I am willing to admit to be two evils."

Upon this Dr. Parkes says, "Coming from such a man, this evidence seems to me indisputable, and, coupled with that derived from watching patients with weak digestions, I think may be called conclusive."

more 3/4
2 glasses is
all ability upon
Parkes is always
stimulant.

Then consider the conditions under which, except
tionally, dilute or mild alcoholic beverages may sometimes be
properly advised, ^{outside the ante room.} 1. Old age, 2. Feeble constitutions, originally
or from cause, 3. Overworked - unable to feed up well.
4. Convalescents, ^{feeble} dyspeptics, &c.

Always regulate quantity, — &
never forget the dangers.

al, was delirious until he was given alcohol. It is just like opium ^{under some pains} in this respect. When needed by the system, its poisonous effects are lost. A certain consumptive gentleman would, after a hemorrhage, take alcohol ^{largely} for a couple of weeks, and when the necessity was over would have no inclination for it. Similar cases I have often known.

Every drop of alcohol is excess to one who is in perfect health. ^{Not by any means always} Physicians often err in advising the use of alcohol. They often ruin men by bad advice. They should remember their responsibility. ^{Needful in disease} ~~Toddism~~ - Stimulism.

The elements of danger of intemperance are quantity, frequency, ^{age} and time of day. The signs of excess are an increase in the pulse, a flushed face, and an effect on the brain.

The danger from quantity does not increase simply ^{in proportion to} but as the square of the quantity. If a man takes two glasses the danger of intemperance

CASE OF A CONSUMPTIVE.

EXCESS IN HEALTH.

ERRORS OF PHYSICIANS.

QUANTITY, FREQUENCY, TIME OF AND DRINKING.

SIGNS OF EXCESS.

QUANTITY.

* Age appears to make this difference, — that early
 in life there is the least need of stimulation, with the
 greatest susceptibility to its action. There is therefore
 increased danger of intemperance, in the young, when they
 are exposed, by excess, to it. Young drinkers go, usually,
 more rapidly from bad to worse than older ones. Early
 intemperance nearly always makes a short life.
 Anacreon must have written his songs in praise of wine before his brain was ^{inwardly} ~~ruined~~
 with it. Epicurus, I believe, appreciated the enjoyment of wine too well to destroy it by taking
 too much.

As to the different effects of doses: in health,

one glass of ^{light} wine may refresh a weary man, —
 two ^{will} exhilarate, & three make him ^{quite} merry; six
 may render him foolish, twelve, insane for the time,
 and more ^{still may bring} ~~render~~ him ^{to his} stupid as a sot: while the frequent
 repetition of large indulgences is ^{almost} certain final ruin. For hygienic
 effect, in debility, no alcoholic dose ought to be felt at all, as
 alcohol, — but only as food; by invigoration and refreshment.

will be four times as great as if he took only one.

FREQUENCY.

The same applies to frequency. If a man takes ~~too much~~ once a year, there is little ~~risk~~; if once in six months, there is not much; once in 3 months, it looks dangerous; if once a month, it is more so; if once a week, it is probable that soon he will retire every night in unconsciousness. X

SAME RULE.

TIME OF DAY.

The time of day has some effect. Old toppers often moralize to younger, telling them not to take anything before 12 o'clock. This is based on experience.

DOSAGE.

The importance of dosage ~~must~~ ^{should} be properly estimated. When a patient is advised to take alcohol, the dose should be always stated. A hygienic dose should not be more than half the convivial quantity. Half a glass of wine, or half a tumbler of ale, is enough at first. X

HYGIENIC DOSE.

Intemperance as a disease has received

* J. T. Bromfield — "vagrabonds" —

"I would sell out heaven for something warm
To ease this horrible inward sinking."

→ Constance's Case —

1867

† In the ~~spring~~ ^{of 1867} I had the pleasure of being
at ~~Tharshburg~~ ^{was passed} at the time of the passage of
a bill by our Legislature giving additional force
to the laws which enable the control of the person
of a habitual inebriate to be given into safe
hands for his restraint, care and reform.
My friend Dr. Joseph Parrish of this city
is at the head of the movement for establishing
a retreat for the purpose, for which a property
has been bought some miles from our city. It
~~was~~ ^{was} opened ~~before long~~ in 1867, it is now in
full operation, at Medea; the "Sanitarium."
"Moral treatment" plan at Boston: "facing the music!"

Legal notice of the passage of the bill of 1867, & more and differently.

DIPSO MANIA.
OR
OINOMANIA.
OR
METHOMANIA.

many names, dipsomania, oinomania and methomania. It is a fearful malady in its effects and power. Its cure is almost a miracle, and after its cure relapse is ~~apt to occur~~ ^{apparent}.

INEBRIATE'S
RETREAT.

The only way of preventing it is an ^{by want of} inebriates' retreat. There is one in New York state and one in Boston, ^{of and one near Medford in this State N. H.} ~~and one near Medford in this State N. H.~~ ^{has been} granted for a similar institution ~~here~~ ^{Done in Baltimore and in Chicago}.

The value of such an institution is great. Long seclusion ^{generally} is necessary. The most solemn promises ^{often otherwise quite} are unavailable.

OBJECTION.

Several objections have been urged against such ~~xxx~~ institutions. In the first place, it is said that it could never be made large enough; but because we cannot do good to all, it is no reason why we should not do good to as many as we can.

WHO
SHOULD
AVOID
ALCOHOL.

There are two classes who ^{never} should not ~~take~~ alcohol in any form. 1st. Those who have ever been intemperate, 2nd. Those who have a hereditary tendency to intemperance. Such families undoubtedly exist.

End of 13th Lecture, 1873, - 40 minutes long,
by accidental lateness.

Pasteur, however, in 1872, ascertained before the French Academy the discovery of a fungoid vegetation parasitic on the skins of the grapes, whose presence in the juice is the cause of the fermentation. It is his theory that all kinds of fermentation & putrefaction are produced by the presence & influence of minute vegetable or animal organisms, - analogous to the yeast-fungus - torula or saccharomyces cerevisiae. A difficult question to settle. see next page

But 1 lb diastase can ferment 1000 lbs starch.

Beers are usually grain fermented liquors -
Wines mostly fruit-juices fermented -
Spirits are always distilled from either of these.

DIFFERENT
ALCOHOLIC
BEVERAGES.

We now pass to the different kinds of alcoholic beverages. They are classed ~~into~~ beers, wines, and spirits.

BEER.WINE.SPIRITS.

Beers are made by fermentation, from ~~the addition of a ferment agent to a vegetable juice~~ ^{external causes}; wines, by spontaneous fermentation; and spirits by distillation from ^{juice of} wines. When grape sugar ferments it is converted into alcohol and carbonic acid ^{usually}.

BEER.

ITS MANUFACTURE.

Beer is made from malted barley. The grain is allowed to ^{begin to} germinate. By means of ^{the prompt} heat the starch & gluten are ~~changed~~ ^{soluble}. The former is converted into dextrin & then into sugar; and the gluten ^{part of} is converted into diastase which acts on the sugar. One hundred pounds of starch will make one of diastase. At the proper moment the germination is checked ^{by heat & drying}. It is then bruised, put in ^{hot} water (at about ^{160°} 170°) and a some extra starch added. It is ~~then~~ ^{it is} boiled, ~~and~~ ^{it is} hops added. It is then cooled rapidly to about 54°-64° and allowed to ferment for ^{6 or 8} days.

End of
26th Lecture,
1872.

Pasteur's theory
of vital action.

Microderma vini
Microderma aceti, etc.

Liebig - "Catalysis"
or prepared molecular movement.
(Both?)

But vitality probably not
necessary.

Yeast plant -
torula - or
spore.

Contin. molec. change
Helmholtz's exper. with interposed membrane
which prevented transfer of putrefaction.

Does vital force ever control chemical change or action
gently, in material outside of the organism?

In experimentation, whenever we exclude effectually the minutest germs
of veg. & anim. life, almost always at least, we must, by the same means, exclude organic
matter, dead & putrefactive, in the atmosphere. Which exclusion, in such
case, is the cause of the absence of fermentation or putrefaction in
the material under trial? It cannot yet be positively affirmed.

beer

LAGER.

Lager is made by a slower fermentation at a lower temperature. It contains some turpentine also for the casks in which it is stored.

MINUTE VEGETATION.

ferments naturally.

A minute vegetation appears on the surface at first, its cells are 50,000 of an inch in diameter. We do not know its connection with fermentation. *Saccharomyces cerevisiae* certainly.

INGREDIENTS OF BEER.

WATER.

ALCOHOL.

SUGAR.

GLUTEN.

SALTS.

LUBULIN.

FREE ACID

The alcoholic strength of beer varies much. *some homemade* alcohol (from 1 to 1½ per cent in small beers). In porter 3½ - 5½ per cent; brown-stout 5½ - 6½; strong ale, 5½ - 10. ~~But~~ always contains sugar which turns sour when it is kept. It has also a little soluble gluten ^{from the malt}, and salts as sulphates, phosphates, & chlorides. There are about 13 grs. of salts to a pint. Beer has from 4 to 8 per cent. of nutritive matter (milk has ^{at least} 12 per cent.). Lupulin, the principle of hops is in it. Bitter, tonic.

It is ^{concentrated} intoxicating & soporific, and (narcotic) ^{sometimes} It is said that lager will not intoxicate. It ^{when taken in excess} produces a stupid ^{state} torpor.

Beer also contains free acids, acetic, carbonic, tannic, lactic, & malic.

(Reading)

* Philadelphia ales are ^{often} ~~of~~ ^{good} ~~quality~~ ^{— (1871)}
~~than it was 10 years ago.~~ English ale is rather
 better yet; Bass' pale ale for exportation — & Oxford
 ale — rather famous.

Hygienic dose of ale: for an adult man,
 not accustomed to it, but using ^{continued} it on account of debility,
 — from 2 to 4 fluid ounces, — i.e. from a small wineglassful
 to ½ tumblerful, at dinner or bed-time. For a woman,
 from 1 to 3 fluid ounces. Lager beer, hygienic dose 3 to
 5 fluid ounces.

Lager in this county now often has in it
 Cocculus Indicus & other adulterations; so
 testified in a case in Court by a brewer, in 1873 or 1874.

HAY FEVER.

THOMAS C. HOOVER, M. D., of Bellair, Ohio, writes to the American Journal of Medical Science as follows:—

"Miss M. E., who had been suffering from recurring attacks of catarrhus aestivus for eleven years, consulted me as to what means she should try for relief. The disease had uniformly recurred on the 1st of August and had a mean duration of six

should

in all, about
To be hygienic
be clear and
no acid taste.

HYGIENIC
BEER.

Ale and ^{other} beers are the best forms of alcohol for convalescence and dyspepsia; but their qualities vary with the manufacture.

GOUT.

Excess of beer, especially without exercise, ^{tends to} cause gout. Delir. tremens seldom.

ALE
BETTER THAN
PORTER.

With most people, ale agrees better than porter. The latter differs ^{much} in strength. It is colored by charred malt or burnt sugar. Brown stout is a strong port.

LAGER.

Lager is ^{as} good if pure, as any beer.

ADULTERATIONS.

The adulterations of beer, ^{are} first, carbonate of soda. It is added to old beer. 2nd. Sulphuric acid to clarify it. ^{several} 3rd. Cocculus Indicus, berries, which ^{are} ~~are~~ ^{used} ~~used~~ to destroy vermin, but ^{are} ~~are~~ ^{used} ~~used~~ as an adulteration.

CARB. OF SODA.

SULPHURIC ACID.

COCCULUS INDI-
CUS.

GRAINS OF
PARADISE.

4th. In England, grains of Paradise are used. They are narcotic & injurious.

STRICHNIA.

5th. It is said, ~~probably~~ ^{probably} wrongly, that strychnia is used in England.
H. H. Parker

PICRIC ACID IN LAGER BEER.— Some of the German brewers have found that picric acid is a cheap substitute for the wholesome bitter of the hop, and are making the poisonous picrate of ammonia do duty for lupulin. Whether the trick has been tried in this country we do not know, but it is well to state a means of detecting it which Pohl has discovered. Unbleached sheep's wool is steeped for a few minutes in the suspected beverage, and assumes a canary-yellow color if picric acid be present.

Reading

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~~than it was 10 years ago.~~ English ale is rather better yet; Bass' pale ale for exportation — & Oxford ale — rather famous.

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Lager in this county now often has in it Cocculus Indicus & other adulterations; so testified in a case in court by a brewer, in 1873 or 1874.

of solids (left on evaporation).

in all, about 30 grs. to a pint.

HYGIENIC
BEER.

To be hygienically good, beer should be clear and not very bitter; having no acid taste.

Ale and ^{other} beers are the best forms of alcohol for convalescents and dyspepsia; but their qualities vary with the manufacture.

GOUT.

Excess of beer, especially without exercise ^{tends to} cause gout. Delir. tremens seldom.

ALE
BETTER THAN
PORTER.

With most people, ale agrees better than porter. The latter differs ^{much} in strength. It is colored by charred malt or burnt sugar. Brown stout is a strong porter.

LAGER.

Lager is ^{as} good if pure, as any beer.

ADULTERATIONS.

CARB. OF SODA.

SULPHURIC ACID.

COCCULUS INDICUS.

The adulterations of beer, are ^{several} first, carbonate of soda. It is added to old beer. 2nd. Sulphuric acid to clarify it. 3rd. Cocculus Indicus, berries, which are ^{often} used to destroy vermin, but are ^{in beer as} used as an adulteration.

GRAINS OF PARADISE.

4th. In England, grains of Paradise, ^{a sort of cardamom, anamum melligneto} are used. They are narcotic & injurious.

STRICHNIA.

5th. It is said, ~~probably~~ wrongly, that strychnia is used in England.

Wm. H. Parker derry N.H.

~~Caouim~~ [^] Caouim in Brazil (Indians)
Marrow & juice of a tree (milk tree?)
or Cow-tree -

Brook? [←]

CURIOSITIES
OF
BEVERAGES.

MAIZE.

PECULIAR
PROCESS.FEEJEE
ISLANDS.BOOZEN
OF
TARTARS.LACTIC
ACID.

Dr. Parker says it would not pay to ^{add} it. ^{permented} ^{but} ^{brief}
 [Curiosities of beverages require] mentioning. In S. America, maize
 beer is made either like our, malting
 or by ^{China cascada} chewing the grain, and spitting
 it out, allowing the salivary diastase
 to ferment it. Sometimes it is made
 in company, all spitting into one
 receptacle. Also made of rice, peas, pineapple juice.

In the Fiji islands the same thing
 is done. It is remarkable that two
 peoples so distantly removed, should
 have the same custom. A company
 of girls makes the king's ava, every
 morning. (page 117.)

Another curious drink is the ^{boozeh} ^{of}
 of the Tartars. ^{made of millet.} This name is also
 applied to an Arabian drink in Abyssinia.

^{of Poo Abyssinica} Lactic acid is abundant in millet
 beer. It resembles milk beer. The
 Himalayans draw this through a pipe
 after the manner of sherry cobbler.
 Paraguay tea is taken in the same
 way. W. America.

End 11th Lecture, 1870

[End 10th Lecture on Alimentation, 1871 -
20th of the Course.]

Methylin?

QUASS.

The quass of the Russians, is a strong unpleasant drink, made from rye.

KOUMISS.

^{The Tartars} Koumiss is made from mare's milk, which has more sugar than cow's.

It contains lactic acid ^{Given now in phthisis.}

WINE.

Wines are made by spontaneous fermentation. Sometimes this is very rapid; in grape juice, ^{beginning} taking in only $\frac{1}{2}$ an hour ^{in summer in the open air.}

CIDER.

Cider, being formed by spontaneous fermentation of apple juice, is a wine. Mallic acid is its characteristic. It sours soon and is not a ^{very reliable} ~~good~~ drink. It should not contain more than 9 per ct. ^{generally 3 to 5 per cent.} of alcohol. It is not nutritive to any extent. Brandy is often added to make it keep.

PERRY.

~~The~~ malic remarks apply to perry, made from pear juice. It is said to be ^{sometimes} used to adulterate ^{grape} wine.

MEAD

* Mead is a pleasant, mild drink made from honey. ^{Current wine may be made very good; & so may that from some other fruits.} But ^{much} the most important wine is

GRAPE.

that made from grapes. The ^{of this} quality ^{much} varies depending on many causes.

But judges do not find them yet to equal ^{the best of} those
 imported from Europe. Piere Blot, in an article in the ~~Salary~~ ^{Salary},
 a few years ago, asserted their equality; but I fear his French quantity,
 disposition to please Americans, there got the better of his
 critical taste. Met some Catawba wine, now made (1873), is
 really very fruity & good, and of a beautiful color. 1875,
 excellent. Catawba wine is made in Ennesee Valley, N.Y. state.
 Winous fermentation best at about 65° Fahr.

A gentleman who had visited the Island of Madeira told me that then
 Mr. J. Barton told me that in Isle of Madeira, which
 he has visited, ^{some} of medium quality is "aged" or made
 to imitate the old, by heating it in casks, by
 stoves, to 150° or 160°, for ~~months~~ ^{months} at a time.
 6 months of heating are said to be equivalent to
 6 years of keeping. To a critical taste, however,
 such wines have some smoky taste, not quite
 up to the best old wine.

Pasteur, ^{more recently has proposed} ~~has~~, a rapid process of maturing wines by
 heat. I believe it is simply exposing it for a day or two
 to a still higher temperature than that before mentioned as in use.

CAUSES
OF
VARIATION.

KIND OF GRAPE.

CLIMATE.

SOIL.

LOCALITY.

TOBACCO.
COTTON

Johannesberg
&
Steinberg.

SEASON.

CULTURE.

TIME
OF GATHERING.

FERMENTATION.

TEMPERATURE.

—o—

SKINS.

RED
&
WHITE
WINES.

The Riesling grape is a favorite in Europe; ^{yet} It depends on the kind of grape. Certain wines cannot be made here. ^{yet} ^{some} ^{Cornwall} ^{varieties} here. A warm climate and a ^{certain} soil are necessary. Our country is not deficient in these. ^{and Missouri} California produce ^{as yet} the best American wines. ^{locality} Locality has some effect. Just as the best cotton can be raised on the coast of S. Carolina, only, and the best tobacco in two places so with grapes. ^{Johannesberg} Johannesberg grapes are raised on 100 acres of land. ^{Steinberg} Steinberg grapes on a small tract also. ^{Season} Season and culture make a difference. ^{Time of gathering} Time of gathering:— should be just when ripe; as citric acid is in unripe grapes. ^{Mode of fermentation} Mode of fermentation, temperature at which it is made, temperature at which it is kept, &c. all affect it.

Lately, ^{it is said that} they have been able to make new wines old by a quick process. ^{all wines do not gain by age; the best gain the most by keeping.} Grape skins contain tannic acid and give a red color to wine. In Italy, red and white wines can be

See Pop. Sci. Monthly, June, 1874: species of grape vine.
 Europe, *Vitis vinifera*; America, *V. californica*, *V. rotundifolia*, *V. vulpina*. East, least *V. vulpina*.

Porton's Virginia, &c.
 North of 350 Lat.

Muscadine wine, made in

1st
 ②
 ③
 40 to 100 acres only - wine to be made -
 worth £6000 to £7000 - single bottle only
 purchased there - for 5 florins -
 known by Napoleon to his Marshalls -
 afterwards of Austria Emperor to Prince Metternich -
 100 bottles of it sold (1872) from cellars
 of (late emperor) Napoleon III.
 Languedoc & Roussillon, France.

End of 12th Lecture 1867
 11th 1868.
 11th 1869

It is estimated that the annual production of wine in the United States amounts to round numbers to 20,000,000 gallons. California, the largest producer, yields one-fifth this amount, 5,000,000; Ohio about 1,500,000; New York, 3,000,000.

It is thus seen that the Grapes obtained till now were inferior to the present ones.

WINE IS IMPROVED BY KEEPING.

PER CENT OF ALCOHOL.

PORT
SHERRY
MADEIRA
MARSALLA
BORDEAUX
CLARET
BURGUNDY
CHAMPAGNE
MOSELLE
RHINE
HESSIAN
HUNGARIAN
ITALIAN

but is given on account of the name of the grape in France. Most wines are generally very sweet.

Hessian Rhine
Hungarian
Italian

24 per cent. 15-25
- 25 "
1 - 22 "
- 25 "
- 18 (6-16)
3 - 14 "
8 - 13 (5-15)
8 - 13 "
6.7 - 16 (5-15)
10.2 - 15 "
9 - 15 "
14 - 19 "

so & rosso, the wine being caused the wines are red naturally so. spoil, wine is improving. Good wines improve, the bad get worse by it. analyses show the fol- tions of alcohol to be

Sup. 1962
226

See Pop. Science Monthly, June, 1874: species of grape vine.
European, Vitis vinifera; American, Vitis rotundifolia; Delaware, V. rotundifolia; Clinton, Delaware, V. rotundifolia; East, West, Middle, V. rotundifolia.

Most celebrated
wine districts of the
"Rheingau" - a
famous tract from
Mayence, on East
bank of the Rhine, past
Assmannshausen, Rudesheim,
Eisenstein, Johannisberg,
Maxebach, Stenberg,
Hochheim.
Next after these Scher-
locker, Stein.
Burgundy vines, grown at
Assmannshausen, produce
a red wine; the best in
this district white wines.
Rudesheim - White wine finest.

Muscadine wine, made in

1st
②
③
40,000 acres only - wine of the
worth £6000 to £7000 - single bottles only
purchasable there - for 5 florins -
given by Napoleon to his Marshal's
afterwards of Austria Emperor Prince Metternich -
100 bottles of it sold (1872) from cellars
of (late emperor) Napoleon III.
Languedoc & Roussillon, France.

End of 12th Lecture 1867
11th 1868.
11th 1869

It was recently estimated that the annual production of wine in the United States amounts to 20,000,000 gallons. California, the largest producer, yields one to four million gallons; New York, 3,000,000; Pennsylvania, 2,500,000; Illinois, 2,500,000; and Virginia, 2,500,000. In these six States, the wine is produced in such quantities that it shall entitle the owner to exemption from such property in all other places.

Changing Church Names.—In the Legislature of New Jersey, at its last session, an act was passed authorizing any church, incorporated by the laws of the State, to change its corporate name or title, by a resolution passed at a meeting of the trustees; such resolution shall be certified under its corporate seal, and, if verified in the same manner as deeds for lands are required to be proved, and, when filed in the office of the clerk of the county in which such church is situated, such corporation shall thereafter be known and may bring and defend actions and suits at law or in equity by such new name. The assumption of the new title, however, does not release said church from any debt or obligation previously incurred.

Gloucester City.—On Monday evening two men, named John Doyle and Edw. O'Hara, were seen busying the slip-tender at the foot of the wharf.

Xerxes

being caused
the wines are red
naturally so.
poil, wine is im-
proving. Good wines improve, the bad get better by it.
Analyses show the fol-
lows of alcohol to be

WINE IS
IMPROVED
BY
KEEPING.

PER CENT
OF
ALCOHOL.

| | | | | |
|-----------|-----------|-------------------------|--------------|-------|
| PORT | Port | Xerxes is in Spain | 24 per cent. | 15-25 |
| SHERRY | Sherry | Reques from Cadix | 25 | " |
| MADEIRA | Madeira | Constancia is near | 22 | " |
| MARSALLA | Marsalla | Cape of Good Hope | 25 | " |
| BORDEAUX | Bordeaux | Muscato or muscade | 18-16 | " |
| CLARET | Claret | not a local name | 3-14 | " |
| BURGUNDY | Burgundy | but is given on account | 8-13 | 5-15 |
| CHAMPAGNE | Champagne | the name of the grape | 8-13 | " |
| MOSELLE | Moselle | in France, Muscat wine | 6-7 | 16-15 |
| RHINE | Rhine | are usually very sweet | 10-2 | 15 |
| HESSIAN | Hessian | Hungarian | 9 | 15 |
| HUNGARIAN | Hungarian | Italian | 14 | 19 |
| ITALIAN | Italian | | | |

Sup. 1962
226

It was recently estimated that the annual production of wine in the United States amounts to 20,000,000 gallons. California, the largest producer, yields one-fourth this amount, 5,000,000; New York, 3,000,000; fourth, this amount, 3,500,000; New York, 3,000,000; and Illinois each 2,500,000. In these six States, one-sixth of the country, the vines are naturally so.

Xerxes,

being caused the wines are red naturally so. In fact, wine is improving. Good wines improve the bad get more by it. Analyses show the following of alcohol to be

WINE IS IMPROVED BY KEEPING.

PER CENT OF ALCOHOL.

PORT
SHERRY
MADEIRA
MARSALLA
BORDEAUX
CLARET
BURGUNDY
CHAMPAGNE
MOSELLE
RHINE
HESSIAN
HUNGARIAN
ITALIAN

Port is in Spain
Sherry from Oporto
Madeira Constantia is near Cape of Good Hope
Bordeaux Muscat or muscade
Claret is not a local name
Burgundy but is given on account of the name of the grape in France. Muscat wine is generally very sweet.
Champagne Hessian wine
Hungarian
Italian

| | |
|--------------|-------|
| 24 per cent. | 15-25 |
| 25 | " |
| 22 | " |
| 25 | " |
| 18 | 16-18 |
| 3-14 | " |
| 8-13 | 5-15 |
| 8-13 | " |
| 6.7-16 | 5-15 |
| 10.2-15 | " |
| 9-15 | " |
| 14-19 | " |

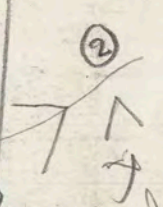
Sup. 1962
226

See Pop. Science Monthly, June, 1874: species of grape vine.
 European, *Vitis vinifera*; American, *V. californica*, *V. rotundifolia*, *V. vulpina*. East, best *Phylloxera*.
 2244

Forest Rhine
 wines those of
 mountain sites of
 Rudesheim & Hatten-
 haus; from Orleans
 or Hartheyst grape,
 or from native Rhine
 grapes, or Riesling.
 next, Steinberg Joh-
 nenberg; then, Rotten-
 berg; then, Markbun-
 knäferberg; all from
 Riesling grape; light brown.
 Rudesheim wine has
 been sold ^{in the spot} at \$14.25 per
 gallon.

Cassid wine good.
 Lacrima Christi is made
 on Mt. Vesuvius; *S. maritima*.
 Pelorion is *Passiflora*, over

Muscadine wine, made in



1st
 ②
 ③ Johannisberg wine vine,
 40 to 100 acres only - wine of famous
 worth £6000 to 7000 - some bottles only
 purchasable there - for 5 florins -
 given by Napoleon to one of his marshals -
 of Austria Emperor to Prince Metternich -
 100 bottles of it sold (1872) from cellars
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End of 12th Lecture 1867
 11th 1868.
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It is estimated that the annual production of wine in the United States amounts to round numbers to 20,000,000 gallons. California, the largest producer, yields one-fourth this amount, 5,000,000; Ohio about one-sixth, 3,500,000; New York, 3,000,000; Missouri and Illinois each 2,500,000, and Pennsylvania, 3,000,000. In these six States are produced all the wines of the country, excepting about 1,500,000 gallons raised in smaller quantities in the other States. E. Wines are produced in some quantity in nearly every State and Territory, 20,000 gallons a year being credited to New Jersey, and 5000 gallons to Delaware. The annual value of our wine crop is about \$14,000,000. termixture of adventitious spirits. The samples which, the chief inspector states, were carefully distilled over by an officer of the department, and the results ascertained both by specific gravities and a well adjusted Sykes's hydrometer, yielded proof spirit as follows:—Reisling, 24.5; Muscat, 27.8; Shiraz, 27.8; Verdeilho, 29.0; Sheraz, 29.0; Malbec, 28.6; Carbinet, 27.5

X rosso,
being caused
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naturally so.
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analyses show the fol-

WINE IS
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PER CENT
OF
ALCOHOL.

lowing proportions of alcohol to be in wines (by weight)?

| | | | |
|-----------|--------------------|---------------------|----------|
| PORT | Port wine | 16.6 - 24 per cent. | 15 - 25 |
| SHERRY | Sherry | 16. - 25 | " |
| MADEIRA | Madeira | 16.7 - 22 | " |
| MARSALLA | Marsalla | 15. - 25 | " |
| BORDEAUX | Bordeaux & Claret, | 7. - 18 | 6 - 16,, |
| CLARET | Burgundy | 7.3 - 14 | " |
| BURGUNDY | Champagne | 5.8 - 13 | 5 - 15,, |
| CHAMPAGNE | Moselle | 8. - 13 | " |
| MOSELLE | Rhine | 6.7 - 16 | 5 - 15,, |
| RHINE | Hessian Rhine | 10.2 - 15 | " |
| HESSIAN | Hungarian | 9. - 15 | " |
| HUNGARIAN | Italian | 14. - 19 | " |
| ITALIAN | | | |

Sup. 1962
226

See Pop. Science Monthly, June, 1874: species of grape vine.
 Emperor, Vitis amurensis; American, Calaveras, etc.
 ripens Clinton, Delaware, etc.; Eastern, W. Virginia. East, best played for.

Wine of Rhine
 those of

NOTICE TO STOCKHOLDERS.
 Board of Directors has this day declared a
 annual dividend of FIVE PER CENT. on the
 stock of the Company, clear of all taxes, pay-
 ay 30th. dividend will be paid to ladies only;
 that date they must await their turn with
 stockholders.
 Powers of Attorney can be had at the Office
 Company. EDMUND SMITH.
 Treasurer.

LENS' BANK.
 For Deposit, Discount and Savings.
 southeast Corner of Second and Race streets.
 CAPITAL, FULL PAID, \$100,000.
 STOCKHOLDERS LIABLE AS WITH NA-
 TIONAL BANKS.
 Funds respectfully solicited and liberally accom-
 modated.

Wines, or Riesling.
 next, Steinberg, Joh-
 nisherg; then, Rother-
 berg; then, Markbrunn.
 Knipferberg; all from
 Riesling grape; light brown.
 Biedersheim wine has
 been sold ^{on the spot} at \$14.25 per
 gallon.

Cassell wine good.
 Lacrima Christi is made
 on Mt. Vesuvius; made in
 Salerno is made in
 over.

Muscadine wine, made in

At 1
 accoun
 colore
 ex-Da

At 1
 will b
 unde
 of ste
 or wa

Ma
 Schu
 Marif

1st
 2
 3
 40 to 100 acres only - wine of Rhine
 worth £6000 to 7000 - single bottles only
 purchasable then - for 5 florins -
 given by Napoleon to his Marshalls -
 100 bottles of it sold (1872) from cellars
 of (late emperor) Napoleon III.
 Languedoc & Roussillon, France.

End of 12th Lecture 1867
 11th 1868.
 11th 1869

It was recently stated in Australia by Dr. Thudicum that it was impossible, according to scientific theory, to produce a natural wine containing more than 26 per cent. of proof spirit. It seems certain, however, that the Australian wines contain a percentage of alcohol exceeding the limit fixed by Dr. Thudicum. Messrs. E. Greer and Co., of William-street, Melbourne, have obtained a report from the chief inspector of distilleries, on samples of Alhury wines submitted, which were certified as being free from any intermixture of adventitious spirits. The samples which, the chief inspector states, were carefully distilled over by an officer of the department, and the results ascertained both by specific gravities and a well adjusted Sykes's hydrometer, yielded proof spirit as follows:—Reisling, 24.5; Muscat, 27.8; Shiraz, 27.8; Verdelho, 29.0; Sheraz, 29.0; Malbec, 28.6; Carbinet, 27.5

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the wines are red
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WINE IS
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PER CENT
OF
ALCOHOL.

following proportions of alcohol to be
in wines (by weight)?

| | | | |
|-----------|--------------------|---------------------|---------|
| PORT | Port wine | 16.6 - 24 per cent. | 15 - 25 |
| SHERRY | Sherry | 16. - 25 | " |
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| MARSALLA | Marsalla | 15. - 25 | " |
| BORDEAUX | Bordeaux & Claret, | 7. - 18 | 6-16. |
| CLARET | | | |
| BURGUNDY | Burgundy | 7.3 - 14 | " |
| CHAMPAGNE | Champagne | 5.8 - 13 | 5-15. |
| MOSELLE | Moselle | 8. - 13 | " |
| RHINE | Rhine | 6.7 - 16 | 5-15. |
| HESSIAN | Hessian Rhine | 10.2 - 15 | " |
| HUNGARIAN | Hungarian | 9. - 15 | " |
| ITALIAN | Italian | 14. - 19 | " |

Sup. 196
226

See Pop. Science Monthly, June, 1874: species of grape vine.
 European, Vitis vinifera; American, Labrusca, etc.;
 Chinese, Clinton, Delaware, etc.;

20 CASES
 Large Cakes and Golden Tobacco.

Messrs. H. Jones & Co. will sell
ON SATURDAY,

Boxes Baking Powder
 Cases French Brandy
 Cases Huntley & Palmer's Biscuits
 BY ORDER OF SHIPPERS.

**Upholsterers and House
 Furnishers.**

**SATURDAY MORNING Messrs.
 JONES & Co. will offer at Sale
 FLOOR OIL CLOTHS.**

Rest, nothing; then, Rother-
 berg; then, Marksbun-
 den; then, Rotherberg; all from
 Riesling grape; light brown.
 Ridesheim wine has
 been sold on the spot at \$14.25 per
 gallon.

Cassell wine good.

Lacrima Christi is made
 on Mt. Vesuvius; S. M. M. M.
 Felician is made in Italy.

Muscadine wine, made in

N
 V

1st
 ②
 ③ Johannides wine, -
 40 to 100 acres only - wine of the same
 worth £6000 to 7000 - single bottles only
 purchased there - for 5 florins -
 now by Napoleon to and his Marshall's
 of Austria Emperor to Paris with him -
 100 bottles of it sold (1872) from cellars
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 Languedoc & Roussillon, France,

End of 12th Lecture 1867
 11th 1868.
 11th 1869

of the same name, — blanco & rosso,

had, the difference being caused by the skins. Some wines are red from the juice being naturally so.

WINE IS
IMPROVED
BY
KEEPING.

If it does not spoil, wine is improved by keeping. Good wines improve, the bad get worse by it.

PER CENT
OF
ALCOHOL.

~~The latest~~ analyses show the following proportions of alcohol to be in wines (by weight)?

| | | | |
|-----------|--------------------|---------------------|----------|
| PORT | Port wine | 16.6 - 24 per cent. | 15 - 25 |
| SHERRY | Sherry | 16. - <u>25</u> " | " |
| MADEIRA | Madeira | 16.7 - 22 " | " |
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| BORDEAUX | Bordeaux & Claret, | 7. - 18 | 6 - 16 " |
| CLARET | | | |
| BURGUNDY | Burgundy | 7.3 - 14 " | " |
| CHAMPAGNE | Champagne | 5.8 - 13 | 5 - 15 " |
| MOSELLE | Moselle | 8. - 13 | 11 " |
| RHINE | Rhine | <u>6.7</u> - 16 | 5 - 15 " |
| HESSIAN | Hessian Rhine | 10.2 - 15 " | " |
| HUNGARIAN | Hungarian | 9. - 15 " | " |
| ITALIAN | Italian | 14. - 19 " | " |

Sup. 1962
226

STRENGTH
OF
SPIRITS.Strength of Spirits.

| | | | |
|---------|----------|-----------|---------|
| Brandy, | 50-60 | per cent. | alcohol |
| Whisky | 50-60 | " | " |
| Gin | 49-60 | " | " |
| Rum | 50-60-77 | " | " |

CHANCES
OF
LIVING.Chances of Living.TemperateIntemperate

At 20 = 44.2 years

= 15.6 years

30 = 36.5 "

= 13.8 "

40 = 28.8 "

= 11.6 "

50 = 21.25 "

= 10.8 "

60 = 14.285 "

= 8.9 "

LENGTH OF
LIFE AFTER
BEGINNING
INTEMPERANCE.Average Length of Life after
Beginning of Intemperance.

| | |
|----------------------------|-----------|
| In Mechanics & Laborers | 18 years. |
| Merchants & Traders | 17 " |
| Professional men & of Ease | 15 " |
| Females | 14. " |

See pp. 196
& 225.

CONSTITUENTS OF WINE.

SUGAR.

DRY WINE.

TOKAY,
PORT,CHAMPAGNE,
MADEIRA,

SHERRY,

CLARET,
MOSELLE,
&c.

FREE ACID.

CERANTHIC
ETHER.

SALTS.

FREE ACID.

SHERRY,
PORT,
CHAMPAGNE,
CLARET,
MADEIRA,
BURGUNDY,
MOSELLE
RHINE.NOT
NOURISHING.

Lecture XI.

The constituents of wine are ^{Several} ~~many~~ ^{various} ~~various~~. When there is little sugar it is called ^{or} dry wine. The sweetest is Tokay ^{next} wine. ^{Muscat} Port [?] has about 16 ^{of sugar} grs. to a gallon; champagne, 6-28 grs; Madaira, 6-20; sherry, 4-20; claret, Moselle, ~~Rhone~~ very little.

2nd. Free acid; ^{malic} racemic, tartaric, acetic, citric, lactic, carbonic, and fatty acids.

Ceranthic ether (1 part in 4000) is present in wine. Bouquet ^{but this also p. 5;} ^{is perfume} as there is something else which we cannot tell the nature of.

Wine also contains salts, as tartrate of lime, phosphate of magnesia.

The order of wines according to their amount of free acid, from the least to the greatest is: sherry, port, champagne, claret, Madeira, Burgundy, Moselle, and Rhine.

Wine is less nourishing than beer. It has ~~less~~ no gluten, no nitrogen.

9 Hygienic dose of wine, for debility, —
 Madeira, Sherry, Port, about 1 fluid ounce; Claret or Rhine
 wines, — 2 fluid ounces. Champagne I would never advise
 for such use. It is the least friendly to digestion (in my
 opinion) of all wines, ^{which wines more artfully} unless the sourest hock.
 than Rhine wines —

^ In London there are at least twice as
 many spirit-drinking establishments as beer and
 wine shops together. When whiskey, gin or brandy
 costs by the glass or the bottle no more, or even less,
 than wine, — the inducement is to get the stronger, &
 thus more stimulus for the money; while the rapid
 effect of spirits sooner begets the habit of intemperance.
 I believe cheap light wines to be an advantage to a country.

chusetts Board of Health. In both offices he is said to have been most efficient.

FINE OF A DRUGGIST.—A Paris druggist has just been fined five hundred francs for selling, without an order from a physician, pastiles made of calomel.

HYDROPHOBIA.—According to M. Bourrel, a veterinary surgeon at Paris, *canine rabies* may be prevented by blunting the canine and incisor teeth of the animal. He has tried it.

IN Bremen, a sum of money has been collected to offer as a prize to the discoverer of the most economical and æsthetic mode of performing cremation.

PROFESSOR ROKITSKY of Vienna, has had the wine and in port, logwood &c. Port is oftener adulterated than any other, hence its use is abandoned in medicine. Manufact. wines. Like almost Champagne much counterfeited.

Wine is anti-scorbutic. Lehman proved this many years ago, and it was verified by experience during the Crimean war.

A question of general hygiene, is whether it is an advantage to have cheap wines. Two views are taken. ^{to a community} ~~Tax~~ ^{that wine production} ~~tollers~~ say it ought not to be encouraged. In wine countries there is ^{some} intemperance. On the other hand it is ^{assumed to be} favorable to temperance. The tendency ^{the use of} to spirits is perhaps owing somewhat to cold ^{ness of} climate. The disposition to excess is greater than in the wine.

Best wines for hygienic use: Sherry - Claret - Burgundy & best Rhine wines; ~~golden champagne~~.

NOT TONIC OR
SOPORIFIC.

GOUT.

AGLUTININ.

WATER.
SPIRITS.

LOG-WOOD.

ANTI-SCORBUTIC.

IS IT AN
ADVANTAGE
TO HAVE
CHEAP WINES?

DIFFERENT
VIEWS.

229
bitter or narcotic principle.

soporific. It is
indicating than beer.

(pages 135, & 197)

and, with water,
neutralize acidity,

Hypocrite Dose of wine, for debility, —
 Madeira, Sherry, Port, about 1 fluid ounce; Claret or Rhine
 wines, — 2 fluid ounces. Champagne I would never advise
 for such use. It is the least friendly to digestion (in my
 opinion) of all wines, unless the sourest hock.
 than Rhine wines —

MEANS OF DISCOVERING WHETHER RED WINES ARE
 ARTIFICIALLY COLORED OR NOT.—M. de Cherville, in
Le Temps, gives the following useful hints for deciding
 whether red wines are or are not artificially colored:
 "Pour into a glass a small quantity of the liquid which
 you wish to test, and dissolve a bit of potash in it. If
 no sediment forms, and if the wine assumes a greenish
 hue, it has not been artificially colored; if a violet sedi-
 ment forms, the wine has been colored with elder or
 mulberries; if the sediment is red, it has been colored
 with beet-root or Pernambuco wood; if violet-red, with
 logwood; if yellow, with 'phytolac' berries; if violet-
 blue, with privet berries; and if pale violet, with sun-
 flower."

In London there are at least twice as
 many spirit-drinking establishments as beer and
 wine shops together. When whiskey, gin or brandy
 costs by the glass or the bottle no more, or even less,
 than wine, — the inducement is to get the stronger, &
 thus more stimulus for the money; while the rapid
 effect of spirits sooner begets the habit of intemperance.
 I believe cheap light wines to be an advantage to a country.

from any bitter or narcotic principle.

NOT TONIC OR
SEPORIFIC.

It is not tonic or seporific. It is more exciting & intoxicating than beer.

GOUT.

It produces gout (pages 135, & 197)

ADLER & IN.

WATER.
SPIRITS.

LOG-WOOD.

Wine is adulterated, with water, spirits, lime salts (to neutralize acidity, and in port, logwood &c. Port is oftener adulterated than any other, hence its use is abandoned in medicine. Manufact. wines. Here almost Champagne much counterfeited.

ANTI-SCORBUTIC.

Wine is anti-scorbutic. Lehman proved this many years ago, and was verified by experience during the Crimean war.

IS IT AN
ADVANTAGE
TO HAVE
CHEAP WINES?

A question of general hygiene, is whether it is an advantage to have cheap wines. ^{to a community} Two views are taken.

DIFFERENT
VIEWS.

Teetotlers say ^{that wine production} ought not to be encouraged. In wine countries there is ^{Some} intemperance. On the other hand it is ^{assumed to be} favorable to temperance. The tendency ^{the use of} to spirits is perhaps owing somewhat to cold ^{these} climate. The disposition to excess is greater than in ^{the} wine.

Best wines for hygienic use: Sherry - Claret - Burgundy & East & West Rhine wines; ~~also champagne.~~

End 14th Lecture, 1873.

* ^{about}
 ^ Agave Americana: — It blooms once in 10 years,
 in a warm climate; at much longer intervals in the colder.
 "Century plant."

*
 ^ Contains trimethylamin — allied to the
 propylamin of fish-brine.

OTHER VINOUS
BEVERAGES.

GUARAPO.

used in different parts of the north.

There are many other vinous beverages. In the West Indies, guarapo is made from ^{juice of the} sugar cane. In

PULQUE.

Mexico a wine is made from the maquey plant. A hole is cut in the stem, and the sap allowed to flow.

Each plant yields about 8-15 pints daily for two or three months. This pulque soon gets a fetid odor and taste which are very disagreeable until habituated to it.

AGUARDIENTE.

Aguardiente is distilled from it. In the East &

TODDY.

in S. America, toddy is made from the sap of the palm tree.

SPIRITS.

The next in order come spirits: brandy, whisky, gin & rum; ^{distilled}.

BRANDY.

Brandy is distilled from grape wine. The best Cognac is from the best wine. It is ^{somewhat} astringent, and rather more available than the other spirits. I am hard now ^{in diarrhoea} to get. - ^{strongly} affects.

WHISKY.

Whiskey is obtained from grain, as ^{a corn or rye} barley, potato &c. It is often flavored by peat smoke. Emphyreumatic

^ ^x fuel oil if not good in quality; this
ingredient is very positively deleterious.

(— See Richardson, Living Age, May (or April) 1872. —)

perhaps cruet,

matter is

It contains

RUM.

Rum

It is the

GIN

Gin

sometimes other are

uretic; they

WHEN ARE SPIRITS PREFERABLE?

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EFFECT ON:

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STOMACH.

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LIVER.

indigestion

BREATHING

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MUSCLES

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CHANGE OF TISSUE

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tissue, often to a marked extent.

ELIMINATION OF ALCOHOL.

As regards the



elimination of alcohol, some say that it passes in water.

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Artificial Essences
(Rep. Mass. Board of Health, 1873)

Nitro-benzol is "artificial oil
of bitter almonds". It has no quality; this
in no prussic acid in it — but is
poisonous in dose of 8 or 9 drops —
or when long inhaled.

(Oil of bitter almonds can be
quite rid of prussic acid, — and may (or April) 1872. —
ought always to be, — as by repeated
distillation with caustic potassa.)

Butyric ether, in alcohol, is pineapple
essence. Pelargonic ether (Cinnamic ether)
in alcohol is quince essence. Acetate of
Amylic ether makes a gorse-like pear essence.
Valerianate of amylic ether, apple essence.
Mixture of acetate of amylic ether with butyric
ether, banana essence. Other similar
preparations give several other fruit
essences, — strawberry, raspberry,
currant, apricot, &c. —

perhaps create,

matter is often put in to imitate this.

It contains butyric ether, usually, ^{fermented}

RUM.

Rum is obtained from molasses.

It is the strongest of the spirits.

GIN

Gin contains oil of juniper and ^{sometimes} other aromatics. It is hence, di-

uretic; though, like other stimulants of the kidneys, uncertain ^{in this action.}

WHEN ARE SPIRITS PREFERABLE?

in some states, as extreme pro-

stration, spirits are the best, but as an article of regimen & health they should be ~~abandoned~~ ^{ordinarily} avoided altogether.

EFFECT ON:

^{both moderate & in hard drinkers} the examination of special organs ^{alcohol} has been found:

STOMACH.

It hardens the stomach, altering its secretion. Among the signs of

LIVER.

delirium tremens are loss of appetite, indigestion, ^{causes degeneration of} the liver

BREATHING

It acts on respiration, ^{elimination by} retarding the amount of carbonic acid, ex-

MUSCLES

haled. ^{in large amounts} It prostrates the muscular

CHANGE OF TISSUE

power. It retards the change of tissue, often to a marked extent.

ELIMINATION OF ALCOHOL.

As regards the elimination of alcohol, some say that it passes ^{in respiration}

Christie, 13j to 13j½ ^{daily} decided useful to every adult !!

the Ducluk has asserted this order to be
that of aldehyde, not alcohol.
unchanged. It is true that much
does. It is exhaled from the lungs.
Where the system needs it, no such
exhalation takes place: as in low fever.

SPONTANEOUS
COMBUSTION

We sometimes meet with permanent satu-
ration of all the tissues. When this
is the case, spontaneous combust-
ion results from exposure to fire, not spontaneously.

The average length of life &c. are
given in the tables (page 226.) Meison.
The younger intemperance becomes
a habit, the sooner the downfall.

ARE
THERE
CIRCUMSTANCES
WHICH
SPIRITS ARE
ADVANTAGEOUS?

⊗ We will now attempt to answer
the question, are there circumstan-
ces in which spirits are advanta-
geous? 1st. In extreme cold.

EXTREME
COLD,

explorations, Dr. Kane, Hays, P. 239
Hooker (Antarctic) say ^{they} are injurious.

See
Supplement
Notes

Guides in the Alps and bathers at
Dieppe, find themselves better without
So we see that in extreme cold
they are disadvantageous.

EXTREME
HEAT.

In extreme heat the same thing
is asserted by Drs. Carpenter, Jackson,

INDIA.

and Martin. The rapid deaths of the ~~English~~ in India are owing to this cause. So great is the mortality, that the ration of spirits has been reduced one half. Dr. Parkes advises abolishing it altogether.

DR. PARKES.

FLORENCE NIGHTINGALE.

Florence Nightingale is confident that is the great preventive of the acclimation of the British.

EXTREME
FATIGUE.U. S.
1812.

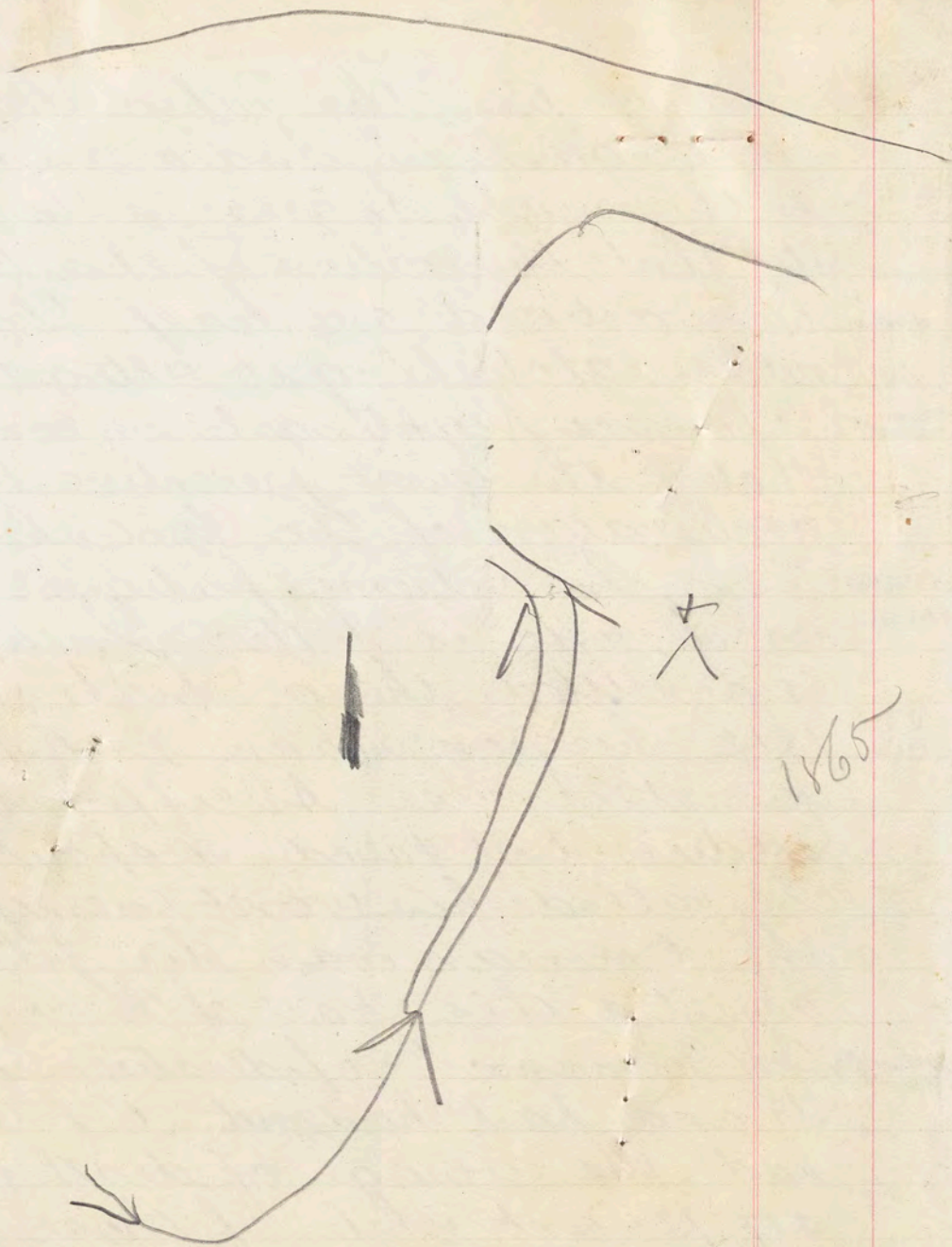
3rd. In extreme fatigue. In shipwreck, coffee is better. In war it is a settled thing. In the war of 1812 Surgeon Mann protested against its use. As coffee is the soldier's best friend, so spirits may be called his worst enemy. In the Crimean war, Sir John Hall asserted this. Part of the corps of the Germanic Confederation had spirits and part had not. Of those who had, the average of deaths was 2.17 per cent while of those who had not, it was 1.27 per cent.

GERMANIC
CONFEDERATION.

MALARIA.

4th Does it protect from malaria?

238



1865

YELLOW
FEVER.

Dr. Drake of Bristol
stintence is betw
5th. Yellow
ous victims
ards.

CHOLERA.

6th. Cholera
drunkards
one else.

AMOUNT
CONSUMED.

In spite
consumed is ~~florid~~ ^{great} In Great
Britain, alone 25,000,000 gallons
a year are used, or in England,
3 $\frac{1}{9}$ gallons per head, Scotland 2 $\frac{1}{9}$,
Ireland 1 $\frac{1}{2}$. Ireland has the
reputation of great intemperance.
Dr. Johnson explains it by saying
that the Celtic race is more ex-
citable, more easily intoxicated,
and that the intemperance occurs
in those who suffer from want
of food.

ENGLAND

SCOTLAND

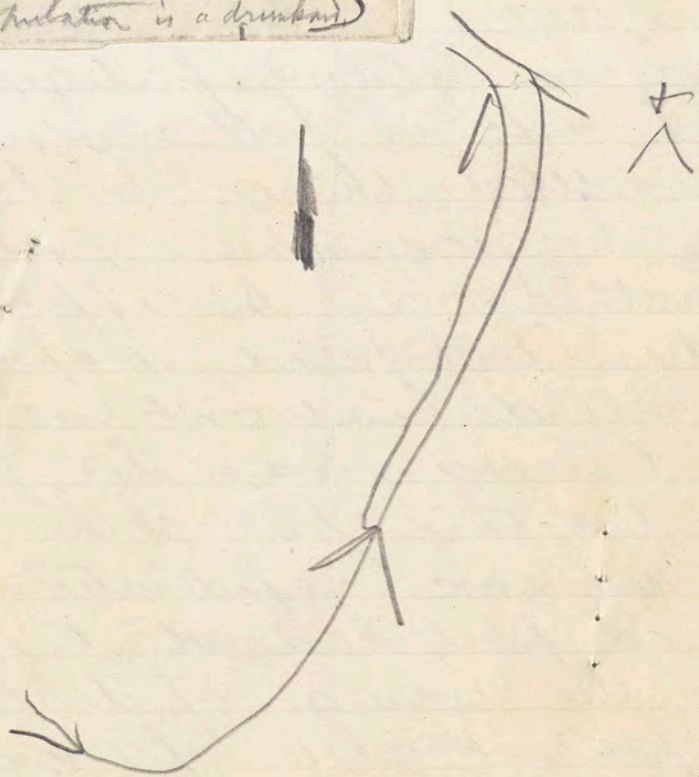
ENGLAND.

FATHER
MATTHEWS.

Since the time of Father Matthews
there has been an increased con-
sumption of spirits in Ireland.

↑
↑
Official, 1 1/2 gallon
Whiskey sold to the common
annual per head of the
population in U.S. ~~★~~

(1966) (A private calculator
has estimated that 1 in 100
of the U.S. population is a drunkard)



...the Vineland Railroad, and accepted a position on the New Jersey Southern Road. The Farmers' Club, of Vineland, has been awarded a silver medal by the Pennsylvania Agricultural Society, for the fine display it made by the club at the late exhibition at Philadelphia.

[Special Despatch to the Public Ledger.]
FROM WASHINGTON.

WASHINGTON, Oct. 30.
The Secretary of War informed Secretary of the Interior to-day, that in compliance with his request, made on the recommendation of the Commissioner of Indian Affairs, he had issued orders to expel from Indian camps in the Valley, all white men not authorized to be there, with a view of suppressing illicit trade with the Indians.

ANALYSIS OF ORES.
The supposed tin ores received at the U. S. Office from Utah Territory, and subjected to a chemical analysis, for assay, but in neither case was any trace of tin be discovered. The U. S. TROOPS. General Sherman knap and General Sherman knap with President Grant, to affairs in Utah, and whether condition of that Territory, and in certain Southern States, towards making a

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Dr. Drake of Cincinnati
stintence is better.

YELLOW
FEVER.

5th. Yellow fever.
ous victims are un
ards.

CHOLERA.

6th. Cholera. It is
drunkards die sooner
one else.

AMOUNT
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In spite of all this, the amount
consumed is fearful. In Great
Britain, alone 25,000,000 gallons
a year are used, or in England,
3 1/9 gallons per head, Scotland 2 1/9,
Ireland 1 1/2. Ireland has the
reputation of great intemperance.
Dr. Johnson explains it by saying
that the Celtic race is more ex-
citabile, more easily intoxicated,
and that the intemperance occurs
in those who suffer from want
of food.

ENGLAND
SCOTLAND
ENGLAND.

FATHER
MATTHEWS.

Since the time of Father Matthews
there has been an increased con-
sumption of spirits in Ireland.

THE SALES OF LIQUORS in the United States during the fiscal year ending June 30th, 1871, it has been calculated by Edward Young, the Chief of the Bureau of Statistics, amounted to six hundred millions of dollars. This total is made up as follows:— Sixty million gallons of whisky, at six dollars a gallon retail, \$360,000,000. Two and a half million gallons of imported spirits at ten dollars a gallon, \$25,000,000. Ten million seven hundred thousand gallons of imported wine at five dollars a gallon, \$53,500,000. Sixty-five million barrels of ale, beer, and porter, at twenty dollars a barrel, \$130,000,000. Native brandies, wines and cordials in unknown quantities, it is estimated have been consumed, involving an expenditure of \$31,500,000. These figures, although not so large as some that have been published, yet give a total that should alarm the consumers of ardent spirits. The sum of six hundred millions of dollars would in less than four years pay the National debt, or if invested in internal improvement, would complete the unfinished and projected works of the United States.

gallon

Common

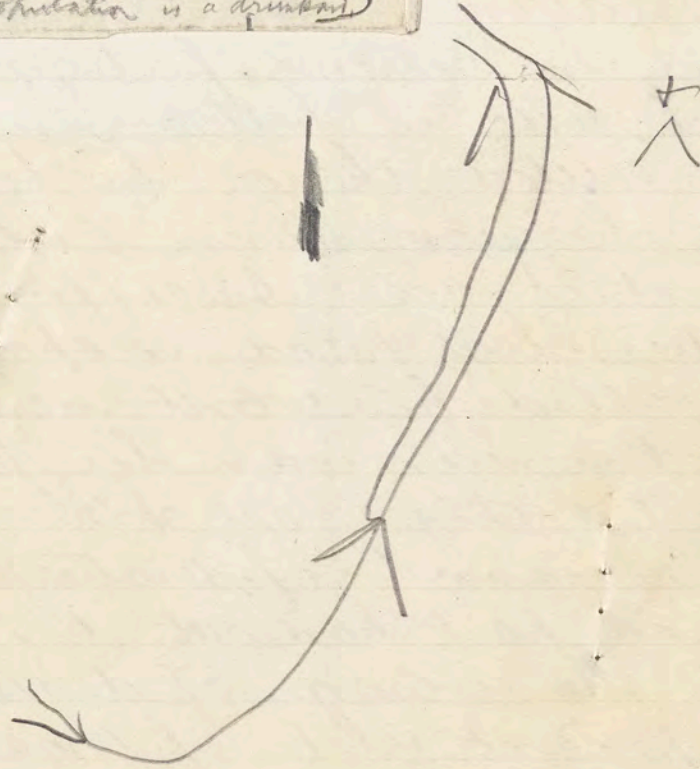
and right

U.S.

calculator

that 1 in 100

that U.S. population is a drunkard



1865

CONSUMPTION OF ALCOHOL IN FRANCE.—
 Dr. Jolly, a French statist, announces that
 the consumption of spirituous liquors and
 alcohol is making rapid progress in France.
 In 1788 there were but 4,400,000 gallons of al-
 cohol sold during the entire year, but in 1840
 this amount had swollen to 22,000,000 gallons,
 and in 1883 to 66,000,000 gallons. In 1840 the
 consumption of alcohol in Paris was equi-
 valent annually to seven quarts for each in-
 habitant, but now the average is twenty-
 six quarts. Dr. Jolly says that 300,000 Pa-
 risians daily indulge in spirituous liquors.
 the keeper, in the hand, and severely of
 our progress and note as precisely as I
 what we have thus far

Dr. Drake of Cincinnati
stintence is better.

YELLOW
FEVER.

5th. Yellow fever.
ous victims are un-
ards.

CHOLERA.

6th. Cholera. It is certain that
drunkards die sooner than any
one else.)*

AMOUNT
CONSUMED,

In spite of ^{all} this, ^{being the truth,} the amount
 consumed is ^{still} fearful. In Great
 Britain, alone 25,000,000 gallons
 a year are used, or in England,
 3 $\frac{1}{9}$ gallons per head, Scotland 2 $\frac{1}{9}$,
 Ireland 1 $\frac{1}{2}$. Ireland has the
 reputation of great intemperance.
 Dr. Johnson explains it by saying
 that the Celtic race is more ex-
 citable, more easily intoxicated,
 and that the intemperance occurs
 in those who suffer from want
 of food.

ENGLAND
SCOTLAND
IRELAND.

FATHER
MATTHEWS.

Since the time of Father Matthew
there has been an increased con-
sumption of spirits in Ireland.

draws emotion from the conversation of surrounding persons; the agreeable privacy of conversation ceases, and you become the de-lammer to a small audience. The effect of this is almost inevitable to silence your companion, particularly if that companion be a lady, and of ordinary lady-like sensibility. There is an opposite extreme of all this, however, which is equally to be deprecated. It is pitching the voice so low, and using so little tone, that remarks have tiresomely to be repeated; moreover, imparting to the conversation a confidential character, by which, when combined with a certain bending or leaning towards the person with whom you are conversing, we have seen ladies excessively and justly annoyed.

It should be remembered, at twenty dollars a barrel, \$130,000,000. Native brandies, wines and cordials in unknown quantities, it is estimated have been consumed, involving an expenditure of \$31,500,000. These figures, although not so large as some that have been published, yet give a total that should alarm the consumers of ardent spirits. That of six hundred millions of dollars would in less than four years pay the National debt, or if invested in internal improvement, would contribute to the unfinished and projected works of the United States.

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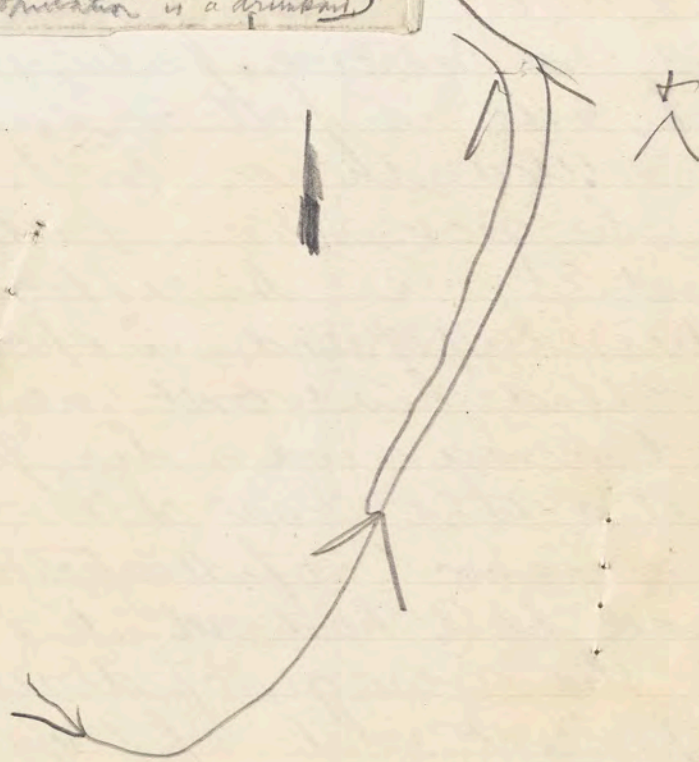
ad rft

U.S.

calculator

that 1 in 100

U.S. population is a drunkard



1865



I b

Dr. Drake of Cincinnati
stintence is better.

DAY MORNING, JULY

THE SHOOTING BY A POLICEMAN. John
Gettigan, who shot James Carroll, the
keeper, in the hand, and severely
out progress and note as precisely as
what we have this for

YELLOW
FEVER.

5th. Yellow fever.
ous victims are und
ards.

CHOLERA.

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in those who suffer from want
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ENGLAND
SCOTLAND
ENGLAND,

FATHER
MATTHEWS.

Since the time of Father Matthews
there has been an increased con-
sumption of spirits in Ireland.

DEATHS FROM INTEMPERANCE.—The statistics of the General Life Insurance Company of London, it is announced, prove that if one hundred thousand intemperate persons from fifteen to seventy years of age be compared with one hundred thousand persons of regular habits, thirty-two of the former class will die as frequently as ten of the latter class. Out of one hundred thousand of each class 16,907 of the intemperate, it is said, will be dead before the age of fifty, and only 4266 of the temperate. The proportion of the deaths of intemperate to temperate persons, it is calculated, is, therefore, thirty-two to ten.

In unknown quantities, it is estimated have been consumed, involving an expenditure of \$31,500,000. These figures, although not so large as some that have been published, yet give a total that should alarm the consumers of ardent spirits. The sum of six hundred millions of dollars would in less than four years pay the National debt, or if invested in internal improvement, would complete the unfinished and projected works of the United States.

that 1 in 100 of the U.S. population is a drunkard

gallon

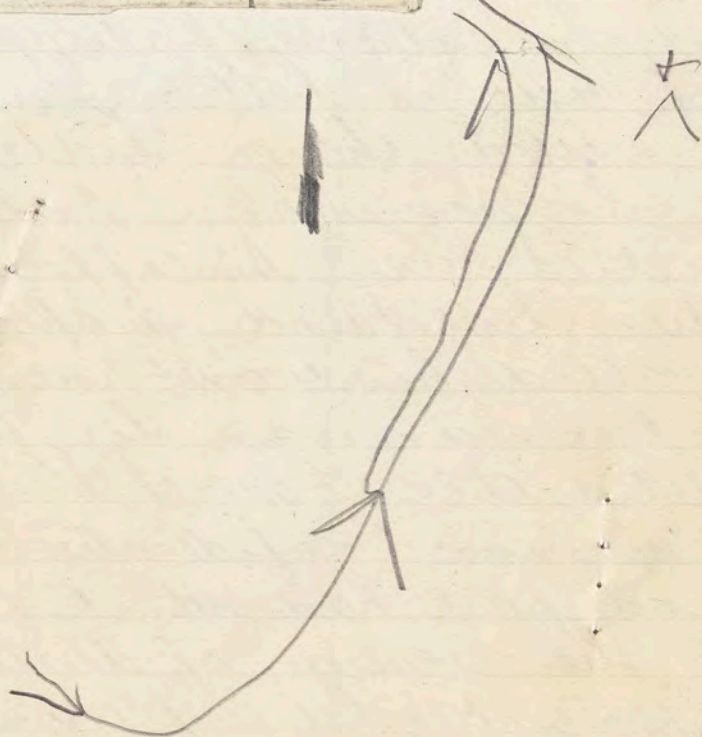
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U.S.

calculator

that 1 in 100



1865

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LEDGER AND TRANSCRIPT
Philadelphia, Tuesday, August 4, 1868

Boston and the Centennial.
The Boston Globe recently contained
the following: Now, shall the Centennial
celebration of 1876 be a success? It is a
fitting thing that at that period in our
national history we should, for our own
sum up the results of our work and ende-
to ascertain where we stand among the
fations of the earth. It will aid us in the
forts of the future thus to take an accou-
our progress and note as precisely as

Dr. Drake of Cincinnati
stintence is better.

YELLOW
FEVER.

5th. Yellow fever.
ous victims are un-
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of food.

ENGLAND
SCOTLAND
ENGLAND,

FATHER
MATTHEWS.

Since the time of Father Matthews
there has been an increased con-
sumption of spirits in Ireland.

100 years ago!

Massachusetts. Flip and toddy were sinful drinks also much in vogue with our abandoned ancestors. Madeira was the favorite wine all over the country, and rum punch found favor without distinction of party. The students of Harvard were allowed "in a sober manner to entertain one another and strangers with it," the corporation having decided rum punch "as it is now commonly made, no intoxicating liquor." Nowadays Massachusetts courts decide lager beer to be intoxicating. Can it be that our heads are so much weaker than our fathers'? There were plenty of chances to wet one's whistle in those days. One house in every ten in Philadelphia sold drink, in 1774. So the grand jury found.—F. W. Frost in the Galaxy.


have been consumed, involving an expenditure of \$31,500,000. These figures, although not so large as some that have been published, yet give a total that should alarm the consumers of ardent spirits. That of six hundred millions of dollars would in less than four years pay the National debt, or if invested in internal improvement, would cover the unfinished and projected work of the United States.

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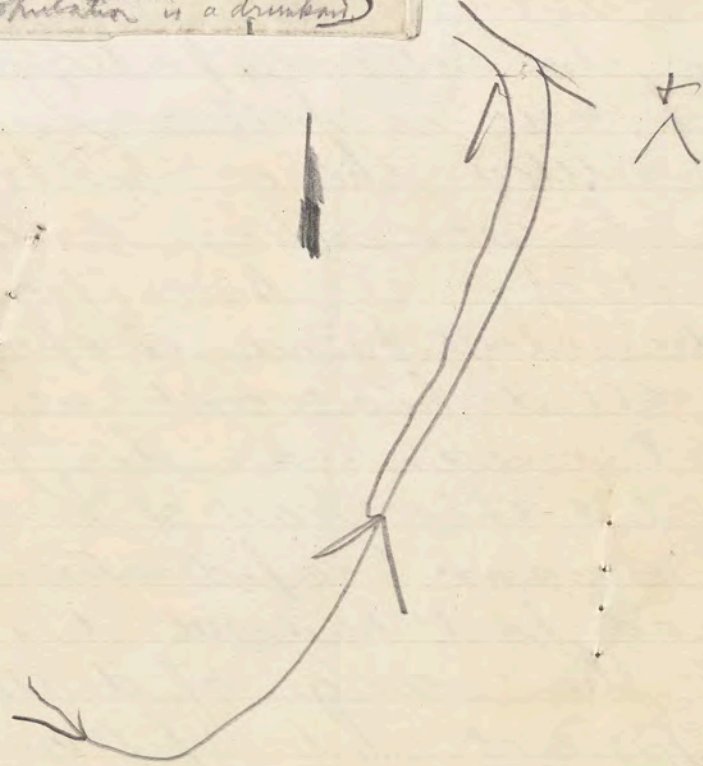
Count

ad rft

U.S. 
calculator

that 1 in 100

1st U.S. population is a drunkard



1865

Dr. Drake of Cincinnati shows that abstinence is better.

YELLOW
FEVER.

5th. Yellow fever. The most numerous victims are unacclimated drunkards.

CHOLERA.

6th. Cholera. It is certain that drunkards die sooner than any one else. *

AMOUNT
CONSUMED.

In spite of all this, ^{being the truth,} the amount consumed is ^{still} fearful. In & Great Britain, alone 25,000,000 gallons a year are used, or in England, $3\frac{1}{9}$ gallons per head, Scotland $2\frac{7}{9}$, Ireland $1\frac{1}{2}$. Ireland has the reputation of great intemperance. Dr. Johnson explains it by saying that the Celtic race is more excitable, more easily intoxicated, and that the intemperance occurs in those who suffer from want of food.

FATHER
MATTHEWS.

Since the time of Father Matthews there has been an increased consumption of spirits in Ireland.

240